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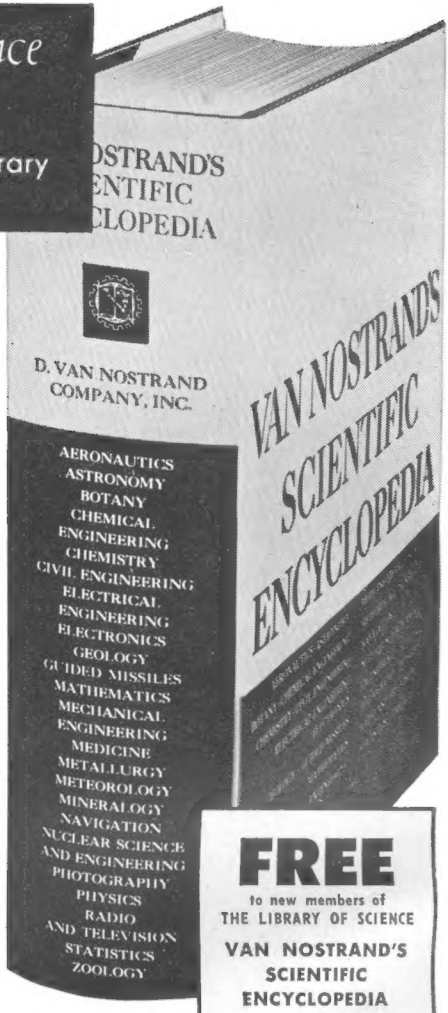

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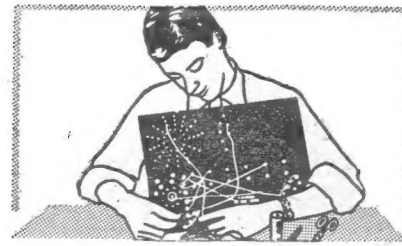

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"WHAT DO YOU MEAN... HUMAN?"

HERE are some questions that only small children and very great philosophers are supposed to ask—questions like "What is Death?" and "Where is God?"

And then there are some questions that, apparently, no one is supposed to ask at all, largely, I think, because people have gotten so many wrong answers, down through the centuries, that it's been agreed-by-default to not ask the questions at all.

Science fiction, however, by its very existence, has been asking one question that belongs in the "Let's agree not to discuss it at all" category—of course, simply by implication, but nevertheless very persistently. To wit: "What do you mean by the term 'human being'?"

It asks the question in a number of ways; the question of "What is a superman?" requires that we first define the limits of "normal man." The problem of "What's a robot?" asks the question in another way.

Some years ago now, Dr. Asimov introduced the Three Laws of Robotics into science fiction:

1. A robot can not harm, nor allow harm to come, to a human being.

2. A robot must obey the orders of human beings.

3. A robot must, within those limits, protect itself against damage.

The crucial one is, of course, the First Law. The point that science fiction has elided very deftly is . . . how do you tell a robot what a human being is?

Look . . . I'll play robot; you tell me what you mean by "human being." What is this entity-type that I'm required to leave immune, and defend? How am I, Robot, to distinguish between the following entities: 1. A human idiot. 2. Another robot. 3. A baby. 4. A chimpanzee.

We might, quite legitimately, include a humanoid alien—or even Tregonsee, E. E. Smith's Rigellian Lensman, and Worsel, the Velantian —which we, as science-fictioneers, have agreed fulfill what we *really* mean by "human"! But let's not make the problem that tough just yet.

We do, however, have to consider the brilliant question Dr. W. Ross Ashby raised: If a mechanic with an artificial arm is working on an engine, is the mechanical arm part of the organism struggling with the environment, or part of the environment the organism is struggling with? If I, Robot, am to be instructed properly, we must consider human beings with prosthetic attachments. And, if I am a really functional robot, then that implies a level of technology that could turn up some very fancy prosthetic devices. Henry Kuttner some years back had a story about a man who had, through an accident, been reduced to a brain in a box; the box, however, had plug-in connections whereby it could be coupled to allow the brain in the box to "be" a whole spaceship, or a power-excavator, or any other appropriate machine.

Is this to be regarded as "a robot" or "a human being"? Intuitively we feel that, no matter how many prosthetic devices may be installed as replacements, the human being remains.

The theologians used to have a very handy answer to most of those questions; a human being, unlike animals or machines, has a soul. If that is to be included in the discussion, however, we must also include the associated problems of distinguishing between human beings and incubi, succubi, demons and angels. The problem then takes on certain other aspects . . . but the problem remains. History indicates that it was just as difficult to distinguish between humans and demons as it is, currently, to distinguish between humans and robots.

Let's try a little "truth-table" of the order that logicians sometimes use, and that advertisers are becoming fond of. We can try various suggested tests, and check off how the various entities we're trying to distinguish compare. (Top—page 7)

You can, of course, continue to extend this, with all the tests you care to think of. I believe you'll find that you can find no test within the entire scope of permissible-in-our-society-evaluations that will permit a clear distinction between the five entities above.

Note, too, that that robot you want to follow the Three Laws is to modify the Second Law—obedience—rather extensively with respect to children and idiots, after you've told it how to distinguish between humanoids and chimpanzees.

There have been a good many wars fought over the question "What do you mean . . . human?" To the Greeks, the peoples of other lands didn't really speak languages—which meant Greek—but made mumbling noises that sounded like *bar-bar-bar*, which proved they were *barbarians*, and not really human.

Test	*Idiot*	*Robot*	*Baby*	*Chimp.*	*Man with Prosthetic aids*
1. Capable of logical thought.	No	Yes	No	No	Yes.
2. "Do I not bleed?" (Merchant of Venice test.)	Yes	No	Yes	Yes	Depends.
3. Capable of speech.	Yes	Yes	No	No	Yes.
4. "Rational animal"; this must be divided into a. Rational	No	Yes	No	No	Yes.
b. Animal	Yes	No	Yes	Yes	Partly.
5. Humanoid form & size.	Yes	Yes	No	Yes	Maybe
6. Lack of fur or hair	*	Yes	Yes	No	Maybe partly.
7. A living being.	Yes	No	Yes	Yes	Depends on what test you use for "living."

*A visit to a beach in summer will convince you that some adult male humans have a thicker pelt than some gorillas.

The law should treat all human beings alike; that's been held as a concept for a long, long time. The Athenians subscribed to that concept. Of course, barbarians weren't really human, so the Law didn't apply to them, and slaves weren't; in fact only Athenian citizens were.

The easy way to make the law apply equally to all men is to so define "men" that the thing actually works. "Equal Justice for All! (All who are equal, of course.)"

This problem of defining what you mean by "human being" appears to be at least as prolific a source of conflict as religion—and may, in fact, be why religion, that being the relationship between Man and God, has been so violent a ferment.

The law never has and never will apply equally to all; there are inferiors and superiors, whether we like it or not, and Justice does not stem from applying the same laws equally to different levels of beings. Before blowing your stack on that one, look again and notice that every human culture has recognized that you could *not* have the same set of laws for children and adults—not since the saurians lost dominance on the planet has that concept been workable. (Reptilian forms are hatched from the egg with all the wisdom they're ever going to have; among reptiles of one species, there is only a difference of size and physical strength.)

Not only is there difference on a vertical scale, but there's displacement

(*Continued on page* 160)

RESTRICTED AREA
KEEP OUT!
NO ADMITTANCE
OFF LIMITS
NO THORO FARE
VASILY WAS HERE
VASILY
KELLY FREAS

First of Two Parts. *Usually, the toughest part of the job is stating the problem clearly, and the solution is then easy. This time the FBI could state the problem easily; solving it, though was not. How do you catch a telepathic spy?*

BY MARK PHILLIPS

Illustrated by Freas

"What are we going to call that sweet little old lady, now that mother *is a dirty word?"*

—Dave Foley

I

N 1914, it was enemy aliens.

In 1930, it was Wobblies.

In 1957, it was fellow travelers.

And, in 1971 . . .

"They could be anywhere," Andrew J. Burris said, with an expression which bordered on exasperated horror. "They could be all around us. Heaven only knows."

He pushed his chair back from his desk and stood up—a chunky little man with bright blue eyes and large hands. He paced to the window and looked out at Washington, and then he came back to the desk. A persistent office rumor held that he had become head of the FBI purely because he happened to have an initial *J* in his name, but in his case the *J* stood for Jeremiah. And, at the moment, his tone expressed all the hopelessness of that Old Testament prophet's lamentations.

"We're helpless," he said, looking at the young man with the crisp brown hair who was sitting across the desk. "That's what it is, we're helpless."

Kenneth Malone tried to look dependable. "Just tell me what to do," he said.

"You're a good agent, Kenneth," Burris said. "You're one of the best. That's why you've been picked for this job. And I want to say that I picked you personally. Believe me, there's never been anything like it before."

"I'll do my best," Malone said at random. He was twenty-eight, and he had been an FBI agent for three years. In that time, he had, among other things, managed to break up a gang of smugglers, track down a counterfeiting ring, and capture three kidnapers. For reasons which he could neither understand nor explain, no one seemed willing to attribute his record to luck.

"I know you will," Burris said. "And if anybody can crack this case, Malone, you're the man. It's just that —everything sounds so *impossible.* Even after all the conferences we've had."

"Conferences?" Malone said vaguely. He wished the chief would get to the point. Any point. He smiled gently across the desk and tried to look competent and dependable and reassuring. Burris' expression didn't change.

"You'll get the conference tapes later," Burris said. "You can study them before you leave. I suggest you study them very carefully, Malone. Don't be like me. Don't get confused." He buried his face in his hands. Malone waited patiently. After a few seconds, Burris looked up. "Did you read books when you were a child?" he asked.

Malone said: "What?"

"Books," Burris said. "When you were a child. Read them."

"Sure I did," Malone said. "'Bomba the Jungle Boy,' and 'Doolittle,' and 'Lucky Starr,' and 'Little Women'—"

"'Little Women'?"

"When Beth died," Malone said, "I wanted to cry. But I didn't. My father said big boys don't cry."

"And your father was right," Burris said. "Why, when I was a . . . never mind. Forget about Beth and your father. Think about 'Lucky Starr' for a minute. Remember him?"

"Sure," Malone said. "I liked those books. You know, it's funny, but the books you read when you're a kid, they kind of stay with you. Know what I mean? I can still remember that one about Venus, for instance. Gee, that was—"

"Never mind about Venus, too," Burris said sharply. "Keep your mind on the problem."

"Yes, sir," Malone said. He paused. "What problem, sir?" he added.

"The problem we're discussing," Burris said. He gave Malone a bright, blank stare. "Just listen to me."

"Yes, sir."

"All right, then." Burris took a deep breath. He seemed nervous. Once again he stood up and went to the window. This time, he spoke without turning. "Remember how everybody used to laugh about spaceships, and orbital satellites, and life on other planets? That was just in those 'Lucky Starr' books. That was all just for kids, wasn't it?"

"Well, I don't know," Malone said slowly.

"Sure it was all for kids," Burris said. "It was laughable. Nobody took it seriously."

"Well, *somebody* must—"

"You just keep quiet and listen," Burris said.

"Yes, sir," Malone said.

Burris nodded. His hands were clasped behind his back. "We're not laughing any more, are we, Malone?" he said without moving.

There was silence.

"Well, are we?"

"Did you want me to answer, sir?"

"Of course I did!" Burris snapped.

"You told me to keep quiet and—"

"Never mind what I told you," Burris said. "Just do what I told you."

"Yes, sir," Malone said. "No, sir," he added after a second.

"No, sir, what?" Burris asked softly.

"No, sir, we're not laughing any more," Malone said.

"Ah," Burris said. "And why aren't we laughing any more?"

There was a little pause. Malone said, tentatively: "Because there's nothing to laugh about, sir?"

Burris whirled. "On the head!" he said happily. "You've hit the nail on the head, Kenneth. I knew I could depend on you." His voice grew serious again, and thoughtful. "We're

not laughing any more because there's nothing to laugh about. We have orbital satellites, and we've landed on the Moon with an atomic rocket. The planets are the next step, and after that the stars. Man's heritage, Kenneth. The stars. And the stars, Kenneth, belong to Man—not to the Soviets!"

"Yes, sir," Malone said soberly.

"So," Burris said, "we should learn not to laugh any more. But have we?"

"I don't know, sir."

"We haven't," Burris said with decision. "Can you read my mind?"

"No, sir," Malone said.

"Can I read your mind?"

Malone hesitated. At last he said: "Not that I know of, sir."

"Well, I can't," Burris snapped. "And can any of us read each other's mind?"

Malone shook his head. "No, sir," he said.

Burris nodded. "That's the problem," he said. "That's the case I'm sending you out to crack."

This time, the silence was a long one.

At last, Malone said: "What problem, sir?"

"Mind reading," Burris said. "There's a spy at work in the Nevada plant, Kenneth. And the spy is a telepath."

The video tapes were very clear and very complete. There were a great many of them, and it was long after nine o'clock when Kenneth Malone decided to take a break and get some fresh air. Washington was a good city for walking, even at night, and Malone liked to walk. Sometimes he pretended, even to himself, that he got his best ideas while walking, but he knew perfectly well that wasn't true. His best ideas just seemed to come to him, out of nowhere, precisely as the situation demanded them.

He was just lucky, that was all. He had a talent for being lucky. But nobody would ever believe that. A record like his was spectacular, even in the annals of the FBI, and Burris himself believed that the record showed some kind of superior ability.

Malone knew that wasn't true, but what could he do about it? After all, he didn't want to resign, did he? It was kind of romantic and exciting to be an FBI agent, even after three years. A man got a chance to travel around a lot and see things, and it was interesting. The pay was pretty good, too.

The only trouble was that, if he didn't quit, he was going to have to find a telepath.

The notion of telepathic spies just didn't sound right to Malone. It bothered him in a remote sort of way. Not that the idea of telepathy itself was alien to him—after all, he was even more aware than the average citizen that research had been going on in that field for something over a quarter of a century, and that the research was even speeding up.

But the cold fact that a telepathy-detecting device had been invented

somehow shocked his sense of propriety, and his notions of privacy. It wasn't decent, that was all.

There ought to be something sacred, he told himself angrily.

He stopped walking and looked up. He was on Pennsylvania Avenue, heading toward the White House.

That was no good. He went to the corner and turned off, down the block. He had, he told himself, nothing at all to see the President about.

Not yet, anyhow.

The streets were dark and very peaceful. *I get my best ideas while walking,* Malone said without convincing himself. He thought back to the video tapes.

The report on the original use of the machine itself had been on one of the first tapes, and Malone could still see and hear it. That was one thing he did have, he reflected; his memory was pretty good.

Burris had been the first speaker on the tapes, and he'd given the serial and reference number in a cold, matter-of-fact voice. His face had been perfectly blank, and he looked just like the head of the FBI people were accustomed to seeing on their TV and newsreel screens. Malone wondered what had happened to him between the time the tapes had been made and the time he'd sent for Malone.

Maybe the whole notion of telepathy was beginning to get him, Malone thought.

Burris recited the standard tape opening in a rapid mumble: "Any person or agent unauthorized for this tape please refrain from viewing further, under penalties as prescribed by law." Then he looked off, out past the screen to the left, and said: "Dr. Thomas O'Connor, of Westinghouse Laboratories. Will you come here, Dr. O'Connor?"

Dr. O'Connor came into the lighted square of screen slowly, looking all around him. "This is very fascinating," he said, blinking in the lamplight. "I hadn't realized that you people took so many precautions—"

He was, Malone thought, somewhere between fifty and sixty, tall and thin with skin so transparent that he nearly looked like a living X ray. He had pale blue eyes and pale white hair and, Malone thought, if there ever were a contest for the best-looking ghost, Dr. Thomas O'Connor would win it hands—or phalanges—down.

"This is all necessary for the national security," Burris said, a little sternly.

"Oh," Dr. O'Connor said quickly, "I realize that, of course. Naturally. I can certainly see that."

"Let's go ahead, shall we?" Burris said.

O'Connor nodded. "Certainly. Certainly."

Burris said: "Well, then," and paused. After a second he started again: "Now, Dr. O'Connor, would you please give us a sort of verbal run-down on this for our records?"

"Of course," Dr. O'Connor said. He smiled into the video cameras and cleared his throat. "I take it you

don't want an explanation of how this machine works. I mean: you don't want a technical exposition, do you?"

"No," Burris said, and added: "Not by any means. Just tell us what it does."

Dr. O'Connor suddenly reminded Malone of a professor he'd had in college for one of the law courses. He had, Malone thought, the same smiling gravity of demeanor, the same condescending attitude of absolute authority. It was clear that Dr. O'Connor lived in a world of his own, a world that was not even touched by the common run of men.

"Well," he began, "to put it very simply, the device indicates whether or not a man's mental . . . ah . . . processes are being influenced by outside . . . by outside influences." He gave the cameras another little smile. "If you will allow me, I will demonstrate on the machine itself."

He took two steps that carried him out of camera range, and returned wheeling a large heavy-looking box. Dangling from the metal covering were a number of wires and attachments. A long cord led from the box to the floor, and snaked out of sight to the left.

"Now," Dr. O'Connor said. He selected a single lead, apparently, Malone thought, at random. "This electrode—"

"Just a moment, doctor," Burris said. He was eying the machine with a combination of suspicion and awe. "A while back you mentioned something about 'outside influences.' Just what, specifically, does that mean?"

With some regret, Dr. O'Connor dropped the lead. "Telepathy," he said. "By outside influences, I meant influences on the mind, such as telepathy or mind reading of some nature."

"I see," Burris said. "You can detect a telepath with this machine."

"I'm afraid—"

"Well, some kind of a mind reader anyhow," Burris said. "We won't quarrel about terms."

"Certainly not," Dr. O'Connor said. The smile he turned on Burris was as cold and empty as the inside of Orbital Station One. "What I meant was . . . if you will permit me to continue . . . that we cannot detect any sort of telepath or mind reader with this device. To be frank, I very much wish that we could; it would make everything a great deal simpler. However, the laws of psionics don't seem to operate that way."

"Well, then," Burris said, "what does the thing do?" His face wore a mask of confusion. Momentarily, Malone felt sorry for his chief. He could remember how he'd felt, himself, when that law professor had come up with a particularly baffling question in class.

"This machine," Dr. O'Connor said with authority, "detects the slight variations in mental activity that occur when a person's mind is *being* read."

"You mean, if my mind were being read right now—"

"Not right now," Dr. O'Connor said. "You see, the bulk of this machine is in Nevada; the structure is both too heavy and too delicate for transport. And there are other qualifications—"

"I meant theoretically," Burris said.

"Theoretically," Dr. O'Connor began, and smiled again, "if your mind were being read, this machine would detect it, supposing that the machine were in operating condition and all of the other qualifications had been met. You see, Mr. Burris, no matter how poor a telepath a man may be, he has some slight ability—even if only very slight—to detect the fact that his mind is being read."

"You mean, if somebody were reading my mind, I'd know it?" Burris said. His face showed, Malone realized, that he plainly disbelieved this statement.

"You would know it," Dr. O'Connor said, "but you would never know you knew it. To elucidate: in a normal person—like you, for instance, or even like myself—the state of having one's mind read merely results in a vague, almost subconscious feeling of irritation, something that could easily be attributed to minor worries, or fluctuations in one's hormonal balance. The hormonal balance, Mr. Burris, is—"

"Thank you," Burris said with a trace of irritation. "I know what hormones are."

"Ah. Good," Dr. O'Connor said equably. "In any case, to continue: this machine interprets those specific feelings as indications that the mind is being . . . ah . . . 'eavesdropped' upon."

You could almost see the quotation marks around what Dr. O'Connor considered slang dropping into place, Malone thought.

"I see," Burris said with a disappointed air. "But what do you mean, it won't detect a telepath? Have you ever actually worked with a telepath?"

"Certainly we have," Dr. O'Connor said. "If we hadn't, how would we be able to tell that the machine was, in fact, indicating the presence of telepathy? The theoretical state of the art is not, at present, sufficiently developed to enable us to—"

"I see," Burris said hurriedly. "Only wait a minute."

"Yes?"

"You mean you've actually got a real mind reader? You've found one? One that works?"

Dr. O'Connor shook his head sadly. "I'm afraid I should have said, Mr. Burris, that we did once have one," he admitted. "He was, unfortunately, an imbecile, with a mental age between five and six, as nearly as we were able to judge."

"An imbecile?" Burris said. "But how were you able to—"

"He could repeat a person's thoughts word for word," Dr. O'Connor said. "Of course, he was utterly incapable of understanding the meaning behind them. That

didn't matter; he simply repeated whatever you were thinking. Rather disconcerting."

"I'm sure," Burris said. "But he was really an imbecile? There wasn't any chance of—"

"Of curing him?" Dr. O'Connor said. "None, I'm afraid. We did at one time feel that there had been a mental breakdown early in the boy's life, and, indeed, it's perfectly possible that he was normal for the first year or so. The records we did manage to get on that period, however, were very much confused, and there was never any way of telling anything at all, for certain. It's easy to see what caused the confusion, of course: telepathy in an imbecile is rather an oddity—and any normal adult would probably be rather hesitant about admitting that he was capable of it. That's why we have not found another subject; we must merely sit back and wait for lightning to strike."

Burris sighed. "I see your problem," he said. "But what happened to this imbecile boy of yours?"

"Very sad," Dr. O'Connor said. "Six months ago, at the age of fifteen, the boy simply died. He simply —gave up, and died."

"Gave up?"

"That was as good an explanation as our medical department was able to provide, Mr. Burris. There was some malfunction, but—we like to say that he simply gave up. Living became too difficult for him."

"All right," Burris said after a pause. "This telepath of yours is dead, and there aren't any more where he came from. Or if there are, you don't know how to look for them. All right. But to get back to this machine of yours: it couldn't detect the boy's ability?"

Dr. O'Connor shook his head. "No, I'm afraid not. We've worked hard on that problem at Westinghouse, Mr. Burris, but we haven't yet been able to find a method of actually detecting telepaths."

"But you can detect—"

"That's right," Dr. O'Connor said. "We can detect the fact that a man's mind is being read." He stopped, and his face became suddenly morose. When he spoke again, he sounded guilty, as if he were making an admission that pained him. "Of course, Mr. Burris, there's nothing we can *do* about a man's mind being read. Nothing whatever." He essayed a grin that didn't look very healthy. "But at least," he said, "you know you're being spied on."

Burris grimaced. There was a little silence while Dr. O'Connor stroked the metal box meditatively, as if it were the head of his beloved.

At last, Burris said: "Dr. O'Connor, how sure can you be of all this?"

The look he received made all the previous conversation seem as warm and friendly as a Christmas party by comparison. It was a look that froze the air of the room into a solid chunk, Malone thought, a chunk you could have chipped pieces from, for souvenirs, later, when Dr. O'Connor had gone and you could get into the

room without any danger of being quick-frozen by the man's unfriendly eye.

"Mr. Burris," Dr. O'Connor said in a voice that matched the temperature of his gaze, "please. Remember our slogan."

Malone sighed. He fished in his pocket for a pack of cigarettes, found one, and extracted a single cigarette. He stuck it in his mouth and started fishing in various pockets for his lighter.

He sighed again. He preferred cigars, a habit he'd acquired from the days when he'd filched them from his father's cigar case, but his mental picture of the fearless and alert young FBI agent didn't include a cigar. Somehow, remembering his father as neither fearless nor, exactly, alert—anyway, not the way the movies and the TV screens liked to picture the words—he had the impression that cigars looked out of place on FBI agents.

And it was, in any case, a small sacrifice to make. He found his lighter and shielded it from the brisk wind. He looked out over water at the Jefferson Memorial, and was surprised that he'd managed to walk as far as he had. Then he stopped thinking about walking, and took a puff of his cigarette, and forced himself to think about the job in hand.

Naturally, the Westinghouse gadget had been declared Ultra Top Secret as soon as it had been worked out. Virtually everything was, these days. And the whole group involved in the machine and its workings had been transferred without delay to the United States Laboratories out in Yucca Flats, Nevada.

Out there in the desert, there just wasn't much to do, Malone supposed, except to play with the machine. And, of course, look at the scenery. But when you've seen one desert, Malone thought confusedly, you've seen them all.

So, the scientists ran experiments on the machine, and they made a discovery of a kind they hadn't been looking for.

Somebody, they discovered, was picking the brains of the scientists there.

Not the brains of the people working with the telepathy machine.

And not the brains of the people working on the several other Earth-limited projects at Yucca Flats.

They'd been reading the minds of some of the scientists working on the new and highly classified non-rocket space drive.

In other words, the Yucca Flats plant was infested with a telepathic spy. And how do you go about finding a telepath? Malone sighed. Spies that got information in any of the usual ways were tough enough to locate. A telepathic spy was a lot tougher proposition.

Well, one thing about Andrew J. Burris—he had an answer for everything. Malone thought of what his chief had said: "It takes a thief to catch a thief. And if the Westinghouse machine won't locate a telepathic spy, I know what will."

"What?" Malone had asked.

"It's simple," Burris had said. "Another telepath. There has to be one around somewhere. Westinghouse *did* have one, after all, and the Russians *still* have one. Malone, that's your job: go out and find me a telepath."

Burris had an answer for everything, all right, Malone thought. But he couldn't see where the answer did him very much good. After all, if it takes a telepath to catch a telepath, how do you catch the telepath you're going to use to catch the first telepath?

Malone ran that through his mind again, and then gave it up. It sounded as if it should have made sense, somehow, but it just didn't, and that was all there was to that.

He dropped his cigarette to the

ground and mashed it out with the toe of his shoe. Then he looked up.

Out there, over the water, was the Jefferson Memorial. It stood, white in the floodlights, beautiful and untouchable in the darkness. Malone stared at it. What would Thomas Jefferson have done in a crisis like this?

Jefferson, he told himself without much conviction, would have been just as confused as he was.

But he'd have had to find a telepath, Malone thought. Malone determined that he would do likewise. If Thomas Jefferson could do it, the least he, Malone, could do was to give it a good try.

There was only one little problem:

Where, Malone thought, *do I start looking?*

II

Early the next morning, Malone awoke on a plane, heading across the continent toward Nevada. He had gone home to sleep, and he'd had to wake up to get on the plane, and now here he was, waking up again. It seemed, somehow, like a vicious circle.

The engines hummed gently as they pushed the big ship through the middle stratosphere's thinly distributed molecules. Malone looked out at the purple-dark sky and set himself to think out his problem again.

He was still mulling things over when the ship lowered its landing gear and rolled to a stop on the big field near Yucca Flats. Malone sighed and climbed slowly out of his seat. There was a car waiting for him at the airfield, though, and that seemed to presage a smooth time; Malone remembered calling Dr. O'Connor the night before, and congratulated himself on his foresight.

Unfortunately, when he reached the main gate of the high double fence that surrounded the more than ninety square miles of United States Laboratories, he found out that entrance into that sanctum sanctorum of Security wasn't as easy as he'd imagined—not even for an FBI man. His credentials were checked with the kind of minute care Malone had always thought people reserved for disputed art masterpieces, and it was with a great show of reluctance that the Special Security guards passed him inside as far as the office of the Chief Security Officer.

There, the Chief Security Officer himself, a man who could have doubled for Torquemada, eyed Malone with ill-concealed suspicion while he called Burris at FBI headquarters back in Washington.

Burris identified Malone on the video screen and the Chief Security Officer, looking faintly disappointed, stamped the agent's pass and thanked the FBI chief. Malone had the run of the place.

Then he had to find a courier jeep. The Westinghouse division, it seemed, was a good two miles away.

As Malone knew perfectly well, the main portion of the entire Yucca Flats area was devoted solely to re-

search on the new space drive which was expected to make the rocket as obsolete as the blunderbuss—at least as far as space travel was concerned. Not, Malone thought uneasily, that the blunderbuss had ever been used for space travel, but—

He got off the subject hurriedly. The jeep whizzed by buildings, most of them devoted to aspects of the non-rocket drive. The other projects based at Yucca Flats had to share what space was left—and that included, of course, the Westinghouse research project.

It turned out to be a single, rather small white building with a fence around it. The fence bothered Malone a little, but there was no need to worry; this time he was introduced at once into Dr. O'Connor's office. It was paneled in wallpaper manufactured to look like pine, and the telepathy expert sat behind a large black desk bigger than any Malone had ever seen in the FBI offices. There wasn't a scrap of paper on the desk; its surface was smooth and shiny, and behind it the nearly transparent Dr. Thomas O'Connor was close to invisible.

He looked, in person, just about the same as he'd looked on the FBI tapes. Malone closed the door of the office behind him, looked for a chair and didn't find one. In Dr. O'Connor's office, it was perfectly obvious, Dr. O'Connor sat down. You stood, and were uncomfortable.

Malone took off his hat. He reached across the desk to shake hands with the telepathy expert, and Dr. O'Connor gave him a limp and fragile paw. "Thanks for giving me a little time," Malone said. "I really appreciate it." He smiled across the desk. His feet were already beginning to hurt.

"Not at all," Dr. O'Connor said, returning the smile with one of his own special quick-frozen brand. "I realize how important FBI work is to all of us, Mr. Malone. What can I do to help you?"

Malone shifted his feet. "I'm afraid I wasn't very specific on the phone last night," he said. "It wasn't anything I wanted to discuss over a line that might have been tapped. You see, I'm on the telepathy case."

Dr. O'Connor's eyes widened the merest trifle. "I see," he said. "Well, I'll certainly do everything I can to help you."

"Fine," Malone said. "Let's get right down to business, then. The first thing I want to ask you about is this detector of yours. I understand it's too big to carry around—but how about making a smaller model?"

"Smaller?" Dr. O'Connor permitted himself a ghostly chuckle. "I'm afraid that isn't possible, Mr. Malone. I would be happy to let you have a small model of the machine if we had one available—more than happy. I would like to see such a machine myself, as a matter of fact. Unfortunately, Mr. Malone—"

"There just isn't one, right?" Malone said.

"Correct," Dr. O'Connor said. "And there are a few other factors. In the first place, the person being analyzed has to be in a specially shielded room, such as is used in encephalographic analysis. Otherwise, the mental activity of the other persons around him would interfere with the analysis." He frowned a little. "I wish that we knew a bit more about psionic machines. The trouble with the present device, frankly, is that it is partly psionic and partly electronic, and we can't be entirely sure where one part leaves off and the other begins. Very trying. Very trying indeed."

"I'll bet it is," Malone said sympathetically, wishing he understood what Dr. O'Connor was talking about.

The telepathy expert sighed. "However," he said, "we keep working at it." Then he looked at Malone expectantly.

Malone shrugged. "Well, if I can't carry the thing around, I guess that's that," he said. "But here's the next question: Do you happen to know the maximum range of a telepath? I mean: How far away can he get from another person and still read his mind?"

Dr. O'Connor frowned again. "We don't have definite information on that, I'm afraid," he said. "Poor little Charlie was rather difficult to work with. He was mentally incapable of co-operating in any way, you see."

"Little Charlie?"

"Charles O'Neill was the name of the telepath we worked with," Dr. O'Connor explained.

"I remember," Malone said. The name had been on one of the tapes, but he just hadn't associated "Charles O'Neill" with "Little Charlie." He felt as if he'd been caught with his homework undone. "How did you manage to find him, anyway?" he said. Maybe, if he knew how Westinghouse had found their imbecile-telepath, he'd have some kind of clue that would enable him to find one, too. Anyhow, it was worth a try.

"It wasn't difficult in Charlie's case," Dr. O'Connor said. He smiled. "The child babbled all the time, you see."

"You mean he talked about being a telepath?"

Dr. O'Connor shook his head impatiently. "No," he said. "Not at all. I mean that he babbled. Literally. Here: I've got a sample recording in my files." He got up from his chair and went to the tall gray filing cabinet that hid in a far corner of the pine-paneled room. From a drawer he extracted a spool of common audio tape, and returned to his desk.

"I'm sorry we didn't get full video on this," he said, "but we didn't feel it was necessary." He opened a panel in the upper surface of the desk, and slipped the spool in. "If you like, there are other tapes—"

"Maybe later," Malone said.

Dr. O'Connor nodded and pressed the playback switch at the side of the

great desk. For a second the room was silent.

Then there was the hiss of empty tape, and a brisk masculine voice that overrode it:

"Westinghouse Laboratories," it said, "sixteen April nineteen-seventy. Dr. Walker speaking. The voice you are about to hear belongs to Charles O'Neill: chronological age fourteen years, three months; mental age, approximately five years. Further data on this case will be found in the file *O'Neill.*"

There was a slight pause, filled with more tape hiss.

Then the voice began.

". . . push the switch for record . . . in the park last Wednesday . . . and perhaps a different set of . . . poor kid never makes any sense in . . . trees and leaves all sunny with the . . . electronic components of the reducing stage might be . . . not as predictable when others are around but . . . to go with Sally some night in the . . ."

It was a childish, alto voice, gabbling in a monotone. A phrase would be spoken, the voice would hesitate for just an instant, and then another, totally disconnected phrase would come. The enunciation and pronunciation would vary from phrase to phrase, but the tone remained essentially the same, drained of all emotional content.

". . . in receiving psychocerebral impulses there isn't any . . . nonsense and nothing but nonsense all the . . . tomorrow or maybe Saturday with the girl . . . tube might be replaceable only if . . . something ought to be done for the . . . Saturday would be a good time for . . . work on the schematics tonight if . . ."

There was a click as the tape was turned off, and Dr. O'Connor looked up.

"It doesn't make much sense," Malone said. "But the kid sure has a hell of a vocabulary for an imbecile."

"Vocabulary?" Dr. O'Connor said softly.

"That's right," Malone said. "Where'd an imbecile get words like 'psychocerebral'? I don't think I know what that means, myself."

"Ah," Dr. O'Connor said. "But that's not *his* vocabulary, you see. What Charlie is doing is simply repeating the thoughts of those around him. He jumps from mind to mind, simply repeating whatever he receives." His face assumed the expression of a man remembering a bad taste in his mouth. "That's how we found him out, Mr. Malone," he said. "It's rather startling to look at a blithering idiot and have him suddenly repeat the very thought that's in your mind."

Malone nodded unhappily. It didn't seem as if O'Connor's information was going to be a lot of help as far as catching a telepath was concerned. An imbecile, apparently, would give himself away if he were a telepath. But nobody else seemed to be likely to do that. And imbeciles didn't look like very good material for catching spies with.

Then he brightened. "Is it possible that the spy we're looking for really isn't a spy?"

"Eh?"

"I mean, suppose he's an imbecile, too? I doubt whether an imbecile would really be a spy, if you see what I mean."

Dr. O'Connor appeared to consider the notion. After a little while he said: "It is, I suppose, possible. But the readings on the machine don't give us the same timing as they did in Charlie's case—or even the same sort of timing."

"I don't quite follow you," Malone said. Truthfully, he felt about three miles behind. But perhaps everything would clear up soon. He hoped so. On top of everything else, his feet were now hurting a lot more.

"Perhaps if I describe one of the tests we ran," Dr. O'Connor said, "things will be somewhat clearer." He leaned back in his chair. Malone shifted his feet again and transferred his hat from his right hand to his left hand.

"We put one of our test subjects in the insulated room," Dr. O'Connor said, "and connected him to the detector. He was to read from a book —a book that was not too common. This was, of course, to obviate the chance that some other person nearby might be reading it, or might have read it in the past. We picked 'The Blood is the Death,' by Hieronymus Melanchthon, which, as you may know, is a very rare book indeed."

"Sure," Malone said. He had never heard of the book, but he was, after all, willing to take Dr. O'Connor's word for it.

The telepathy expert went on: "Our test subject read it carefully, scanning rather than skimming. Cameras recorded the movements of his eyes in order for us to tell just what he was reading at any given moment, in order to correlate what was going on in his mind with the reactions of the machine's indicators, if you follow me."

Malone nodded helplessly.

"At the same time," Dr. O'Connor continued blithely, "we had Charlie in a nearby room, recording his babblings. Every so often, he would come out with quotations from 'The Blood is the Death,' and these quotations corresponded exactly with what our test subject was reading at the time, and also corresponded with the abnormal fluctuations of the detector."

Dr. O'Connor paused. Something, Malone realized, was expected of him. He thought of several responses and chose one. "I see," he said.

"But the important thing here," Dr. O'Connor said, "is the timing. You see, Charlie was incapable of continued concentration. He could not keep his mind focused on another mind for very long, before he hopped to still another. The actual amount of time concentrated on any given mind at any single given period varied from a minimum of one point three seconds to a maximum of two point six. The timing sam-

ples, when plotted graphically over a period of several months, formed a skewed bell curve with a mode at two point oh seconds."

"Ah," Malone said, wondering if a skewed bell curve was the same thing as a belled skew curve, and if not, why not?

"It was, in fact," Dr. O'Connor continued relentlessly, "a sudden variation in those timings which convinced us that there was another telepath somewhere in the vicinity. We were conducting a second set of reading experiments, in precisely the same manner as the first set, and, for the first part of the experiment, our figures were substantially the same. But—" He stopped.

"Yes?" Malone said, shifting his feet and trying to take some weight off his left foot by standing on his right leg. Then he stood on his left leg. It didn't seem to do any good.

"I should explain," Dr. O'Connor said, "that we were conducting this series with a new set of test subjects: some of the scientists here at Yucca Flats. We wanted to see if the intelligence quotients of the subjects affected the time of contact which Charlie was able to maintain. Naturally, we picked the men here with the highest IQ's, the two men we have who are in the top echelon of the creative genius class." He cleared his throat. "I did not include myself, of course, since I wished to remain an impartial observer, as much as possible."

"Of course," Malone said without surprise.

"The other two geniuses," Dr. O'Connor said, "happen to be connected with the project known as Project Isle—an operation whose function I neither know, nor care to know, anything at all about."

Malone nodded. Project Isle was the non-rocket spaceship. Classified. Top Secret. Ultra-Secret. And, he thought, just about anything else you could think of.

"At first," Dr. O'Connor was saying, "our detector recorded the time periods of . . . ah mental invasion as being the same as before. Then, one day, anomalies began to appear. The detector showed that the minds of our subjects were being held for as long as two or three minutes. But the phrases repeated by Charlie during these periods showed that his own contact time remained the same; that is, they fell within the same skewed bell curve as before, and the mode remained constant if nothing but the phrase length were recorded."

"Hm-m-m," Malone said, feeling that he ought to be saying something.

Dr. O'Connor didn't notice him. "At first we thought of errors in the detector machine," he went on. "That worried us not somewhat, since our understanding of the detector is definitely limited at this time. We do feel that it would be possible to replace some of the electronic components with appropriate symbolization like that already used in the purely psionic sections, but we have, as yet, been unable to determine ex-

actly which electronic components must be replaced by what symbolic components."

Malone nodded, silently this time. He had the sudden feeling that Dr. O'Connor's flow of words had broken itself up into a vast sea of alphabet soup, and that he, Malone, was occupied in drowning in it.

"However," Dr. O'Connor said, breaking what was left of Malone's train of thought, "young Charlie died soon thereafter, and we decided to go on checking the machine. It was during this period that we found someone else reading the minds of our test subjects—sometimes for a few seconds, sometimes for several minutes."

"Aha," Malone said. Things were beginning to make sense again. *Someone else.* That, of course, was the spy.

"I found," Dr. O'Connor said, "on interrogating the subjects more closely, that they were, in effect, thinking on two levels. They were reading the book mechanically, noting the words and sense, but simply shuttling the material directly into their memories without actually thinking about it. The actual thinking portions of their minds were concentrating on aspects of Project Isle."

"In other words," Malone said, "someone was spying on them for information about Project Isle?"

"Precisely," Dr. O'Connor said with a frosty, teacher-to-student smile. "And whoever it was had a much higher concentration time than Charlie had ever attained. He seems to be able to retain contact as long as he can find useful information flowing in the mind being read."

"Wait a minute," Malone said. "Wait a minute. If this spy is so clever, how come he didn't read *your* mind?"

"It is very likely that he has," O'Connor said. "What does that have to do with it?"

"Well," Malone said, "if he knows you and your group are working on telepathy and can detect what he's doing, why didn't he just hold off on the minds of those geniuses when they were being tested in your machine?"

Dr. O'Connor frowned. "I'm afraid that I can't be sure," he said, and it was clear from his tone that, if Dr. Thomas O'Connor wasn't sure, no one in the entire world was, had been, or ever would be. "I do have a theory, however," he said, brightening up a trifle.

Malone waited patiently.

"He must know our limitations," Dr. O'Connor said at last. "He must be perfectly well aware that there's not a single thing we can *do* about him. He must know that we can neither find nor stop him. Why should he worry? He can afford to ignore us—or even bait us. We're helpless, and he knows it."

That, Malone thought, was about the most cheerless thought he had heard in some time.

"You mentioned that you had an insulated room," the FBI agent said

after a while. "Couldn't you let your men think in there?"

Dr. O'Connor sighed. "The room is shielded against magnetic fields and electromagnetic radiation. It is perfectly transparent to psionic phenomena, just as it is to gravitational fields."

"Oh," Malone said. He realized rapidly that his question had been a little silly to begin with, since the insulated room had been the place where all the tests had been conducted in the first place. "I don't want to take up too much of your time, doctor," he said after a pause, "but there are a couple of other questions."

"Go right ahead," Dr. O'Connor said. "I'm sure I'll be able to help you."

Malone thought of mentioning how little help the doctor had been to date, but decided against it. Why antagonize a perfectly good scientist without any reason? Instead, he selected his first question, and asked it. "Have you got any idea how we might lay our hands on another telepath? Preferably one that's not an imbecile, of course."

Dr. O'Connor's expression changed from patient wisdom to irritation. "I wish we could, Mr. Malone. I wish we could. We certainly need one here to help us with our work—and I'm sure that *your* work is important, too. But I'm afraid we have no ideas at all about finding another telepath. Finding little Charlie was purely fortuitous—purely, Mr. Malone, fortuitous."

"Ah," Malone said. "Sure. Of course." He thought rapidly and discovered that he couldn't come up with one more question. As a matter of fact, he'd asked a couple of questions already, and he could barely remember the answers. "Well," he said, "I guess that's about it, then, doctor. If you come across anything else, be sure and let me know."

He leaned across the desk, extending a hand. "And thanks for your time," he added.

Dr. O'Connor stood up and shook his hand. "No trouble, I assure you," he said. "And I'll certainly give you all the information I can."

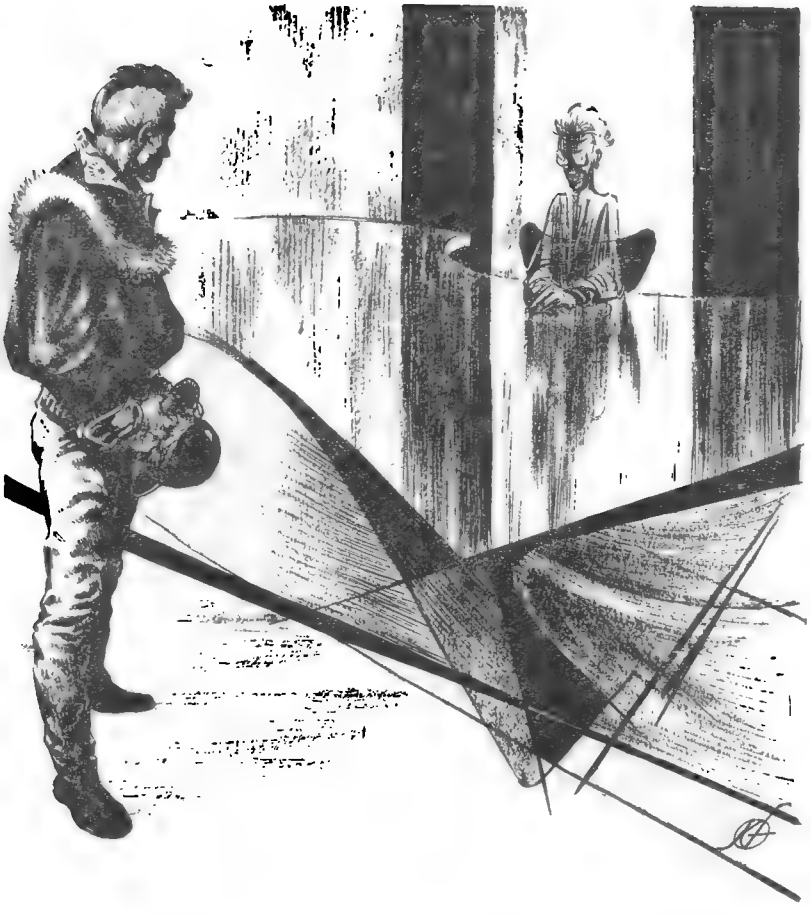
Malone turned and walked out. Surprisingly, he discovered that his feet and legs still worked. He had thought they'd turned to stone in the office long before.

It was on the plane back to Washington that Malone got his first inkling of an idea.

The only telepath that the Westinghouse boys had been able to turn up was Charles O'Neill, the youthful imbecile.

All right, then. Suppose there were another one like him. Imbeciles weren't very difficult to locate. Most of them would be in institutions, and the others would certainly be on record. It might be possible to find someone, anyway, who could be handled and used as a tool to find a telepathic spy.

And — happy thought! — maybe one of them would turn out to be a



high-grade imbecile, or even a moron.

Even if they only turned up another imbecile, he thought wearily, at least Dr. O'Connor would have something to work with.

He reported back to Burris when he arrived in Washington, told him about the interview with Dr. O'Connor, and explained what had come to seem a rather feeble brainstorm.

"It doesn't seem too productive," Burris said, with a shade of disappointment in his voice, "but we'll try it."

At that, it was a better verdict than Malone had hoped for. He had nothing to do but wait, while orders went out to field agents all over the United States, and quietly, but efficiently, the

FBI went to work. Agents probed and pried and poked their noses into the files and data sheets of every mental institution in the fifty states —as far, at any rate, as they were able.

It was not an easy job. The inalienable right of a physician to refuse to disclose confidences respecting a patient applied even to idiots, imbeciles, and morons. Not even the FBI could open the private files of a licensed and registered psychiatrist.

But the field agents did the best they could and, considering the circumstances, their best was pretty good.

Malone, meanwhile, put in two weeks sitting glumly at his Washington desk and checking reports as they arrived. They were uniformly depressing. The United States of America contained more subnormal minds than Malone cared to think about. There seemed to be enough of them to explain the results of any election you were unhappy over. Unfortunately, subnormal was all you could call them. Not one of them appeared to possess any abnormal psionic abilities whatever.

There were a couple who were reputed to be poltergeists—but in neither case was there a single shred of evidence to substantiate the claim.

At the end of the second week, Malone was just about convinced that his idea had been a total washout. A full fortnight had been spent on digging up imbeciles, while the spy at Yucca Flats had been going right on his merry way, scooping information out of the men at Project Isle as though he were scooping beans out of a pot. And, very likely, laughing himself silly at the feeble efforts of the FBI.

Who could he be?

Anyone, Malone told himself unhappily. *Anyone at all.* He could be the janitor that swept out the buildings, one of the guards at the gate, one of the minor technicians on another project, or even some old prospector wandering around the desert with a scintillation counter.

Is there any limit to telepathic range?

The spy could even be sitting quietly in an armchair in the Kremlin, probing through several thousand miles of solid earth to peep into the brains of the men on Project Isle.

That was, to say the very least, a depressing idea.

Malone found he had to assume that the spy was in the United States —that, in other words, there was some effective range to telepathic communication. Otherwise, there was no point in bothering to continue the search.

Therefore, he found one other thing to do. He alerted every agent to the job of discovering how the spy was getting his information out of the country.

He doubted that it would turn up anything, but it was a chance. And Malone hoped desperately for it, because he was beginning to be sure that the field agents were never go-

ing to turn up any telepathic imbeciles.

He was right.

They never did.

III

The telephone rang.

Malone rolled over on the couch and muttered under his breath. Was it absolutely necessary for someone to call him at seven in the morning?

He grabbed at the receiver with one hand, and picked up his cigar from the ashtray with the other. It was bad enough to be awakened from a sound sleep—but when a man hadn't been sleeping at all, it was even worse.

He'd been sitting up since before five that morning, worrying about the telepathic spy, and at the moment he wanted sleep more than he wanted phone calls.

"Gur?" he said, sleepily and angrily, thankful that he'd never had a visiphone installed in his apartment.

A feminine voice said: "Mr. Kenneth J. Malone?"

"Who's this?" Malone said peevishly, beginning to discover himself capable of semirational English speech.

"Long distance from San Francisco," the voice said.

"It certainly is," Malone said. "Who's calling?"

"San Francisco is calling," the voice said primly.

Malone repressed a desire to tell the voice off, and said instead: "*Who* in San Francisco?"

There was a momentary hiatus, and then the voice said: "Mr. Thomas Boyd is calling, sir. He says this is a scramble call."

Malone took a drag from his cigar and closed his eyes. Obviously the call was a scramble. If it had been clear, the man would have dialed direct, instead of going through what Malone now recognized as an operator.

"Mr. Boyd says he is the Agent-in-Charge of the San Francisco office of the FBI," the voice offered.

"And quite right, too," Malone told her. "All right. Put him on."

"One moment." There was a pause, a click, another pause and then another click. At last the operator said: "Your party is ready, sir."

Then there was still another pause. Malone stared at the audio receiver. He began to whistle "When Irish Eyes Are Smiling."

"Hello? Malone?"

"I'm here, Tom," Malone said guiltily. "This is me. What's the trouble?"

"Trouble?" Boyd said. "There isn't any trouble. Well, not really. Or maybe it is. I don't know."

Malone scowled at the audio receiver, and for the first time wished he had gone ahead and had a video circuit put in, so that Boyd could see the horrendous expression on his face.

"Look," he said. "It's seven here and that's too early. Out there, it's

four, and that's practically ridiculous. What's so important?"

He knew perfectly well that Boyd wasn't calling him just for the fun of it. The man was a good agent. But why a call at this hour?

Malone muttered under his breath. Then, self-consciously, he squashed out his cigar and lit a cigarette while Boyd was saying: "Ken, I think we may have found what you've been looking for."

It wasn't safe to say too much, even over a scrambled circuit. But Malone got the message without difficulty.

"Yeah?" he said, sitting up on the edge of the couch. "You sure?"

"Well," Boyd said, "no. Not absolutely sure. Not absolutely. But it is worth your taking a personal look, I think."

"Ah," Malone said cautiously. "An imbecile?"

"No," Boyd said flatly. "Not an imbecile. Definitely not an imbecile. As a matter of fact, a hell of a fat long way from an imbecile."

Malone glanced at his watch and skimmed over the airline timetables in his mind. "I'll be there nine o'clock, your time," he said. "Have a car waiting for me at the field."

As usual, Malone managed to sleep better on the plane than he'd been able to do at home. He slept so well, in fact, that he was still groggy when he stepped into the waiting car.

"Good to see you, Ken," Boyd said briskly, as he shook Malone's hand.

"You, too, Tom," Malone said sleepily. "Now what's all this about?" He looked around apprehensively. "No bugs in this car, I hope?" he said.

Boyd gunned the motor and headed toward the San Francisco Freeway. "Better not be," he said, "or I'll fire me a technician or two."

"Well, then," Malone said, relaxing against the upholstery, "where is this guy, and who is he? And how did you find him?"

Boyd looked uncomfortable. It was, somehow, both an awe-inspiring and a slightly risible sight. Six feet one and one half inches tall in his flat feet, Boyd ported around over two hundred and twenty pounds of bone, flesh and muscle. He swung a potbelly of startling proportions under the silk shirting he wore, and his face, with its wide nose, small eyes and high forehead, was half highly mature, half startlingly childlike. In an apparent effort to erase those childlike qualities, Boyd sported a fringe of beard and a mustache which reminded Malone of somebody he couldn't quite place.

But whoever the somebody was, his hair hadn't been black, as Boyd's was—

He decided it didn't make any difference. Anyhow, Boyd was speaking.

"In the first place," he said, "it isn't a guy. In the second, I'm not exactly sure who it is. And in the third, Ken, I didn't find it."

There was a little silence.

"Don't tell me," Malone said. "It's a telepathic horse, isn't it? Tom, I just don't think I could stand a telepathic horse—"

"No," Boyd said hastily. "No. Not at all. No horse. It's a dame. I mean a lady." He looked away from the road and flashed a glance at Malone. His eyes seemed to be pleading for something—understanding, possibly, Malone thought. "Frankly," Boyd said, "I'd rather not tell you anything about her just yet. I'd rather you met her first. Then you could make up your own mind. All right?"

"All right," Malone said wearily. "Do it your own way. How far do we have to go?"

"Just about an hour's drive," Boyd said. "That's all."

Malone slumped back in the seat and pushed his hat over his eyes. "Fine," he said. "Suppose you wake me up when we get there."

But, groggy as he was, he couldn't sleep. He wished he'd had some coffee on the plane. Maybe it would have made him feel better.

Then again, coffee was only coffee. True, he had never acquired his father's taste for gin, but there was always bourbon.

He thought about bourbon for a few minutes. It was a nice thought. It warmed him and made him feel a lot better. After a while, he even felt awake enough to do some talking.

He pushed his hat back and struggled to a reasonable sitting position. "I don't suppose you have a drink hidden away in the car somewhere?" he said tentatively. "Or would the technicians have found that, too?"

"Better not have," Boyd said in the same tone as before, "or I'll fire a couple of technicians." He grinned without turning. "It's in the door compartment, next to the forty-five cartridges and the Tommy gun."

Malone opened the compartment in the thick door of the car and extracted a bottle. It was brandy instead of the bourbon he had been thinking about, but he discovered that he didn't mind at all. It went down as smoothly as milk.

Boyd glanced at it momentarily as Malone screwed the top back on.

"No," Malone said in answer to the unspoken question. "You're driving." Then he settled back again and tipped his hat forward.

He didn't sleep a wink. He was perfectly sure of that. But it wasn't over two seconds later that Boyd said: "We're here, Ken. Wake up."

"Whadyamean, wakeup," Malone said. "I wasn't asleep." He thumbed his hat back and sat up rapidly. "Where's 'here'?"

"Bayview Neuropsychiatric Hospital," Boyd said. "This is where Dr. Harman works, you know."

"No," Malone said. "As a matter of fact, I don't know. You didn't tell me—remember? And who is Dr. Harman, anyhow?"

The car was moving up a long, curving driveway toward a large, lawn-surrounded building. Boyd spoke without looking away from the road.

"Well," he said, "this Dr. Willard

Harman is the man who phoned us yesterday. One of my field agents was out here asking around about imbeciles and so on. Found nothing, by the way. And then this Dr. Harman called, later. Said he had someone here I might be interested in. So I came on out myself for a look, yesterday afternoon . . . after all, we had instructions to follow up every possible lead."

"I know," Malone said. "I wrote them."

"Oh," Boyd said. "Sure. Well, anyhow, I talked to this dame. Lady."

"And?"

"And I talked to her," Boyd said. "I'm not entirely sure of anything myself. But . . . well, hell. You take a look at her."

He pulled the car up to a parking space, slid nonchalantly into a slot marked *Reserved—Executive Director Sutton,* and slid out from under the wheel while Malone got out the other side.

They marched up the broad steps, through the doorway and into the glass-fronted office of the receptionist.

Boyd showed her his little golden badge, and got an appropriate gasp. "FBI," he said. "Dr. Harman's expecting us."

The wait wasn't over fifteen seconds. Boyd and Malone marched down the hall and around a couple of corners, and came to the doctor's office. The door was opaqued glass with nothing but a room number stenciled on it. Without ceremony, Boyd pushed the door open. Malone followed him inside.

The office was small but sunny. Dr. Willard Harman sat behind a blond-wood desk, a chunky little man with crew-cut blond hair and rimless eyeglasses, who looked about thirty-two and couldn't possibly, Malone thought, have been anywhere near that young. On a second look, Malone noticed a better age indication in the eyes and forehead, and revised his first guess upward between ten and fifteen years.

"Come in, gentlemen," Dr. Harman boomed. His voice was that rarity, a really loud high tenor.

"Dr. Harman," Boyd said, "this is my superior, Mr. Malone. We'd like to have a talk with Miss Thompson."

"I anticipated that, sir," Dr. Harman said. "Miss Thompson is in the next room. Have you explained to Mr. Malone that—"

"I haven't explained a thing," Boyd said quickly, and added in what was obviously intended to be a casual tone: "Mr. Malone wants to get a picture of Miss Thompson directly—without any preconceptions."

"I see," Dr. Harman said. "Very well, gentlemen. Through this door."

He opened the door in the right-hand wall of the room, and Malone took one look. It was a long, long look. Standing framed in the doorway, dressed in the starched white of a nurse's uniform, was the most beautiful blonde he had ever seen.

She had curves. She definitely had curves. As a matter of fact, Malone didn't really think he had ever seen curves before. These were something new and different and truly three-dimensional. But it wasn't the curves, or the long straight lines of her legs, or the quiet beauty of her face, that made her so special. After all, Malone had seen legs and bodies and faces before.

At least, he thought he had. Offhand, he couldn't remember where. Looking at the girl, Malone was ready to write brand-new definitions for every anatomical term. Even a term like "hands." Malone had never seen anything especially arousing in the human hand before—anyway, not when the hand was just lying around, so to speak, attached to its wrist but not doing anything in particular. But these hands, long, slender and tapering, white and cool-looking . . .

And yet, it wasn't just the sheer physical beauty of the girl. She had something else, something more and something different. (*Something borrowed,* Malone thought in a semi-delirious haze, *and something blue.*) Personality? Character? Soul?

Whatever it was, Malone decided, this girl had it. She had enough of it to supply the entire human race, and any others that might exist in the Universe. Malone smiled at the girl and she smiled back.

After seeing the smile, Malone wasn't sure he could still walk evenly. Somehow, though, he managed to go over to her and extend his hand. The notion that a telepath would turn out to be this mind-searing Epitome had never crossed his mind, but now, somehow, it seemed perfectly fitting and proper.

"Good morning, Miss Thompson," he said in what he hoped was a winning voice.

The smile disappeared. It was like the sun going out.

The vision appeared to be troubled. Malone was about to volunteer his help—if necessary, for the next seventy years—when she spoke.

"I'm not Miss Thompson," she said.

"This is one of our nurses," Dr. Harman put in. "Miss Wilson, Mr. Malone. And Mr. Boyd. Miss Thompson, gentlemen, is over there."

Malone turned.

There, in a corner of the room, an old lady sat. She was a small old lady, with apple-red cheeks and twinkling eyes. She held some knitting in her hands, and she smiled up at the FBI men as if they were her grandsons come for tea and cookies, of a Sunday afternoon.

She had snow-white hair that shone like a crown around her old head in the lights of the room. Malone blinked at her. She didn't disappear.

"*You're* Miss Thompson?" he said.

She smiled sweetly. "Oh, my, no," she said.

There was a long silence. Malone looked at her. Then he looked at the

unbelievably beautiful Miss Wilson. Then he looked at Dr. Harman. And, at last, he looked at Boyd.

"All right," he said. "I get it. *You're* Miss Thompson."

"Now, wait a minute, Malone," Boyd began.

"Wait a minute?" Malone said. "There are four people here, not counting me. I know I'm not Miss Thompson. I never was, not even as a child. And Dr. Harman isn't, and Miss Wilson isn't, and Whistler's Great-Grandmother isn't, either. So you must be. Unless she isn't here. Or unless she's invisible. Or unless I'm crazy."

"It isn't *you,* Malone," Boyd said.

"What isn't me?"

"That's crazy," Boyd said.

"O.K.," Malone said. "I'm not crazy. Then will somebody please tell me—"

The little old lady cleared her throat. A silence fell. When it was complete she spoke, and her voice was as sweet and kindly as anything Malone had ever heard.

"You may call me Miss Thompson," she said. "For the present, at any rate. They all do here. It's a pseudonym I have to use."

"A pseudonym?" Malone said.

"You see, Mr. Malone," Miss Wilson began.

Malone stopped her. "Don't talk," he said. "I have to concentrate and if you talk I can barely think." He took off his hat suddenly, and began twisting the brim in his hands. "You understand, don't you?"

The trace of a smile appeared on her face. "I think I do," she said.

"Now," Malone said, "you're Miss Thompson, but not really, because you have to use a pseudonym." He blinked at the little old lady. "Why?"

"Well," she said, "otherwise people would find out about my little secret."

"Your little secret," Malone said.

"That's right," the little old lady said. "I'm immortal, you see."

Malone said: "Oh." Then he kept quiet for a long time. It didn't seem to him that anyone in the room was breathing.

He said: "Oh," again, but it didn't sound any better than it had the first time. He tried another phrase. "You're immortal," he said.

"That's right," the little old lady agreed sweetly.

There was only one other question to ask, and Malone set his teeth grimly and asked it. It came out just a trifle indistinct, but the little old lady nodded.

"My real name?" she said. "Elizabeth. Elizabeth Tudor, of course. I used to be Queen."

"Of England," Malone said faintly.

"Malone, look—" Boyd began.

"Let me get it all at once," Malone told him. "I'm strong. I can take it." He twisted his hat again and turned back to the little old lady.

"You're immortal, and you're not really Miss Thompson, but Queen Elizabeth I?" he said slowly.

"That's right," she said. "How clever of you. Of course, after little

Jimmy—cousin Mary's boy, I mean —said I was dead and claimed the Throne, I decided to change my name and all. And that's what I did. But I am Elizabeth Regina." She smiled, and her eyes twinkled merrily. Malone stared at her for a long minute.

Burris, he thought, *is going to love this.*

"Oh, I'm so glad," the little old lady said. "Do you really think he will? Because I'm sure I'll like your Mr. Burris, too. All of you FBI men are so charming. Just like poor, poor Essex."

Well, Malone told himself, that was that. He'd found himself a telepath.

And she wasn't an imbecile.

Oh, no. That would have been simple.

Instead, she was battier than a cathedral spire.

The long silence was broken by the voice of Miss Wilson.

"Mr. Malone," she said, "you've been thinking." She stopped. "I mean, you've been so quiet."

"I like being quiet," Malone said patiently. "Besides—" He stopped and turned to the little old lady. *Can you really read my mind?* he thought deliberately. After a second he added: . . . *your majesty?*

"How sweet of you, Mr. Malone," she said. "Nobody's called me that for centuries. But of course I can. Although it's not reading, really. After all, that would be like asking if I can read your voice. Of course I can, Mr. Malone."

"That does it," Malone said. "I'm not a hard man to convince. And when I see the truth, I'm the first one to admit it, even if it makes me look like a nut." He turned back to the little old lady. "Begging your pardon," he said.

"Oh, my," the little old lady said. "I really don't mind at all. Sticks and stones, you know, can break my bones. But being called nuts, Mr. Malone, can never hurt me. After all, it's been so many years—so many hundreds of years—"

"Sure," Malone said easily.

Boyd broke in. "Listen, Malone," he said, "do you mind telling me what is going on?"

"It's very simple," Malone said. "Miss Thompson here . . . pardon me; I mean Queen Elizabeth I . . . really is a telepath. That's all. I think I want to lie down somewhere until it goes away."

"Until what goes away?" Miss Wilson said.

Malone stared at her almost without seeing her, if not quite. "Everything," he said. He closed his eyes.

"My goodness," the little old lady said after a second. "Everything's so confused. Poor Mr. Malone is terribly shaken up by everything." She stood up, still holding her knitting, and went across the room. Before the astonished eyes of the doctor and nurse, and Tom Boyd, she patted the FBI agent on the shoulder. "There, there, Mr. Malone," she said. "It will all be perfectly all right. You'll see." Then she returned to her seat.

Malone opened his eyes. He turned

to Dr. Harman. "You called up Boyd here," he said, "and told him that . . . er . . . Miss Thompson was a telepath. Howd' you know?"

"It's all right," the little old lady put in from her chair. "I don't mind your calling me Miss Thompson, not right now, anyhow."

"Thanks," Malone said faintly.

Dr. Harman was blinking in a kind of befuddled astonishment. "You mean she really *is* a—" He stopped and brought his tenor voice to a squeaking halt, regained his professional poise, and began again. "I'd rather not discuss the patient in her presence, Mr. Malone," he said. "If you'll just come into my office—"

"Oh, *bosh,* Dr. Harman," the little old lady said primly. "I do wish you'd give your own Queen credit for some ability. Goodness knows you think *you're* smart enough."

"Now, now, Miss Thompson," he said in what was obviously his best Grade A Choice Government Inspected couchside manner. "Don't . . ."

". . . Upset yourself," she finished for him. "Now, really, doctor. I know what you're going to tell them."

"But Miss Thompson, I—"

"You didn't honestly think I *was* a telepath," the little old lady said. "Heavens, we know that. And you're going to tell them how I used to say I could read minds . . . oh, years and years ago. And because of that you thought it might be worth while to tell the FBI about me—which wasn't very kind of you, doctor, before you know anything about why they wanted somebody like me."

"Now, now, Miss Thompson," Miss Wilson said, walking across the room to put an arm around the little old lady's shoulder. Malone wished for one brief second that he were the old little old lady. Maybe if he were a patient in the hospital he would get the same treatment.

He wondered if he could possibly work such a deal.

Then he wondered if it would be worth while, being nuts. But of course it would. He was nuts anyhow, wasn't he?

Sure, he told himself. They were all nuts.

"Nobody's going to hurt you," Miss Wilson said. She was talking to the old lady. "You'll be perfectly all right and you don't have to worry about a thing."

"Oh, yes, dear, I know that," the little old lady said. "You only want to help me, dear. You're so kind. And these FBI men really don't mean any harm. But Dr. Harman didn't know that. He just thinks I'm crazy and that's all."

"Please, Miss Thompson—" Dr. Harman began.

"Just crazy, that's all," the little old lady said. She turned away for a second and nobody said anything. Then she turned back. "Do you all know what he's thinking now?" she said. Dr. Harman turned a dull purple, but she ignored him. "He's

wondering why I didn't take the trouble to prove all this to you years ago. And besides that, he's thinking about—"

"Miss Thompson," Dr. Harman said. His bedside manner had cracked through and his voice was harsh and strained. "Please."

"Oh, all right," she said, a little petulantly. "If you want to keep all that private."

Malone broke in suddenly, fascinated. "Why didn't you prove you were telepathic before now?" he said.

The little old lady smiled at him. "Why, because you wouldn't have believed me," she said. She dropped her knitting neatly in her lap and folded her hands over it. "None of you *wanted* to believe me," she said, and sniffed. Miss Wilson moved nervously and she looked up. "And don't tell me it's going to be all right. I know it's going to be all right. I'm going to make sure of that."

Malone felt a sudden chill. But it was obvious, he told himself, that the little old lady didn't mean what she was saying. She smiled at him again, and her smile was as sweet and guileless as the smile on the face of his very own sainted grandmother.

Not that Malone remembered his grandmother; she had died before he'd been born. But if he'd had a grandmother, and if he'd remembered her, he was sure she would have had the same sweet smile.

So she couldn't have meant what she'd said. Would Malone's own

grandmother make things difficult for him? The very idea was ridiculous.

Dr. Harman opened his mouth, apparently changed his mind, and shut it again. The little old lady turned to him.

"Were you going to ask why I bothered to prove anything to Mr. Malone?" she said. "Of course you were, and I shall tell you. It's because Mr. Malone *wanted* to believe me. He *wants* me. He *needs* me. I'm a telepath, and that's enough for Mr. Malone. Isn't it?"

"Gur," Malone said, taken by surprise. After a second he added: "I guess so."

"You see, doctor?" the little old lady said.

"But you—" Dr. Harman began.

"I read minds," the little old lady said. "That's right, doctor. That's what makes me a telepath."

Malone's brain was whirling rapidly, like a distant galaxy. "Telepath" was a nice word, he thought. How did you telepath from a road?

Simple.

A road is paved.

Malone thought that was pretty funny, but he didn't laugh. He thought he would never laugh again. He wanted to cry, a little, but he didn't think he'd be able to manage that either.

He twisted his hat, but it didn't make him feel any better. Gradually, he became aware that the little old lady was talking to Dr. Harman again.

"But," she said, "since it will make you feel so much better, doctor, we give you our Royal permission to retire, and to speak to Mr. Malone alone."

"Malone alone," Dr. Harman muttered. "Hm-m-m. My. Well." He turned and seemed to be surprised that Malone was actually standing near him. "Yes," he said. "Well. Mr. Alone . . . Malone . . . please, whoever you are, just come into my office, please?"

Malone looked at the little old lady. One of her eyes closed and opened. It was an unmistakable wink.

Malone grinned at her in what he hoped was a cheerful manner. "All right," he said to the psychiatrist, "let's go." He turned with the barest trace of regret, and Boyd followed him. Leaving the little old lady and, unfortunately, the startling Miss Wilson, behind, the procession filed back into Dr. Harman's office.

The doctor closed the door, and leaned against it for a second. He looked as though someone had suddenly revealed to him that the world was square. But when he spoke his voice was almost even.

"Sit down, gentlemen," he said, and indicated chairs. "I really . . . well, I don't know what to say. All this time, all these years, she's been reading my mind! My mind. She's been reading . . . looking right into my mind, or whatever it is."

"Whatever what is?" Malone asked, sincerely interested. He had dropped gratefully into a chair near

Boyd's, across the desk from Dr. Harman.

"Whatever my *mind* is," Dr. Harman said. "Reading it. Oh, my."

"Dr. Harman," Malone began, but the psychiatrist gave him a bright blank stare.

"Don't you understand?" he said. "She's a telepath."

"We—"

The phone on Dr. Harman's desk chimed gently. He glanced at it and said: "Excuse me. The phone." He picked up the receiver and said: "Hello?"

There was no image on the screen.

But the voice was image enough. "This is Andrew J. Burris," it said. "Is Kenneth J. Malone there?"

"Mr. Malone?" the psychiatrist said. "I mean, Mr. Burris? Mr. Malone is here. Yes. Oh, my. Do you want to talk to him?"

"No, you idiot," the voice said. "I just want to know if he's all tucked in."

"Tucked in?" Dr. Harman gave the phone a sudden smile. "A joke," he said. "It *is* a joke, isn't it? The way things have been happening, you never know whether—"

"A joke," Burris' voice said. "That's right. Yes. Am I talking to one of the patients?"

Dr. Harman gulped, got mad, and thought better of it. At last he said, very gently: "I'm not at all sure," and handed the phone to Malone.

The FBI agent said: "Hello, chief. Things are a little confused."

Burris' face appeared on the screen. "Confused, sure," he said. "I feel confused already." He took a breath. "I called the San Francisco office, and they told me you and Boyd were out there. What's going on?"

Malone said cautiously: "We've found a telepath."

Burris' eyes widened slightly. "Another one?"

"What are you talking about, another one?" Malone said. "We have one. Does anybody else have any more?"

"Well," Burris said, "we just got a report on another one—maybe. Besides yours, I mean."

"I hope the one you've got is in better shape than the one I've got," Malone said. He took a deep breath, and then spat it all out at once: "The one we've found is a little old lady. She thinks she's Queen Elizabeth I. She's a telepath, sure, but she's nuts."

"Queen Elizabeth?" Burris said. "Of England?"

"That's right," Malone said. He held his breath.

"Damn it," Burris exploded, "they've already got one"

Malone sighed. "This is another one," he said. "Or, rather, the original one. She also claims she's immortal."

"Lives forever?" Burris said. "You mean like that?"

"Immortal," Malone said. "Right."

Burris nodded. Then he looked worried. "Tell me, Malone," he said. "She *isn't,* is she?"

"Isn't immortal, you mean?" Ma-

lone said. Burris nodded. Malone said confidently: "Of course not."

There was a little pause. Malone thought things over.

Hell, maybe she was immortal. Stranger things had happened, hadn't they?

He looked over at Dr. Harman. "How about that?" he said. "Could she be immortal?"

The psychiatrist shook his head decisively. "She's been here for over forty years, Mr. Malone, ever since her late teens. Her records show all that, and her birth certificate is in perfect order. Not a chance."

Malone sighed and turned back to the phone. "Of course she isn't immortal, chief," he said. "She couldn't be. Nobody is. Just a nut."

"I was afraid of that," Burris said.

"Afraid?" Malone said.

Burris nodded. "We've got another one—if he checks out," he said. "Right here in Washington—St. Elizabeths."

"Another nut?"

"Strait-jacket case," Burris said. "Delusions of persecution. Paranoia. And a lot of other things I can't pronounce. But I'm sending him on out to Yucca Flats anyhow, under guard. You might find a use for him."

"Oh, sure," Malone said.

"We can't afford to overlook a thing," Burris said.

Malone sighed. "I know," he said. "But all the same—"

"Don't worry about a thing, Malone," Burris said with a palpably false air of confidence. "You get this Queen Elizabeth of yours out of there and take her to Yucca Flats, too."

Malone considered the possibilities. Maybe they would find more telepaths. Maybe all the telepaths would be nuts. It didn't seem unlikely. Imagine having a talent that nobody would believe you had. It might very easily drive you crazy to be faced with a situation like that.

And there they would be in Yucca Flats. Kenneth J. Malone, and a convention of looney-bin inhabitants.

Fun!

Malone began to wonder why he had gone into FBI work in the first place.

"Listen, chief," he said. "I—"

"Sure, I understand," Burris said quickly. "She's batty. But what else can we do? Malone, don't do anything you'll regret."

"What?"

"I mean, don't resign."

"Chief, how did you know—you're not telepathic too, are you?"

"Of course not," Burris said. "But that's what I would do in your place. And don't do it."

"Look, chief," Malone said. "These nuts—"

"Malone, you've done a wonderful job so far," Burris said. "You'll get a raise and a better job when all this is over. Who else would have thought of looking in the twitch-bins for telepaths? But you did, Malone, and I'm proud of you, and you're stuck with it. We've got to use them now. We have to find that

spy!" He took a breath. "On to Yucca Flats!" he said.

Malone gave up. "Yes, sir," he said. "Anything else?"

"Not right now," Burris said. "If there is, I'll let you know."

Malone hung up unhappily as the image vanished. He looked at Dr. Harman. "Well," he said, "that's that. What do I have to do to get a release for Miss Thompson?"

Harman stared at him. "But, Mr. Malone," he said, "that just isn't possible. Really. Miss Thompson is a ward of the state, and we couldn't possibly allow her release without a court order."

Malone thought that over. "O.K.," he said at last. "I can see that." He turned to Boyd. "Here's a job for you, Tom," he said. "Get one of the judges on the phone. You'll know which one will do us the most good, fastest."

"Hm-m-m," Boyd said. "Say Judge Dunning," he said. "Good man. Fast worker."

"I don't care who," Malone said. "Just get going, and get us a release for Miss Thompson." He turned back to the doctor. "By the way," he said, "has she got any other name? Besides Elizabeth Tudor, I mean," he added hurriedly.

"Her full name," Dr. Harman said, "is Rose Walker Thompson. She is not Queen Elizabeth I, II, or XXVIII, and she is not immortal."

"But she is," Malone pointed out, "a telepath. And that's why I want her."

"She may," Dr. Harman said, "be a telepath." It was obvious that he had partly managed to forget the disturbing incidents that had happened a few minutes before. "I don't even want to discuss that part of it."

"O.K., never mind it," Malone said agreeably. "Tom, get us a court order for Rose Walker Thompson. Effective yesterday—day before, if possible."

Boyd nodded, but before he could get to the phone Dr. Harman spoke again.

"Now, wait a moment, gentlemen," he said. "Court order or no court order, Miss Thompson is definitely not a well woman, and I can't see my way clear to—"

"I'm not well myself," Malone said. "I need sleep and I probably have a cold. But I've got to work for the national security, and—"

"This is important," Boyd put in.

"I don't dispute that," Dr. Harman said. "Nevertheless, I—"

The door that led into the other room suddenly burst open. The three men turned to stare at Miss Wilson, who stood in the doorway for a long second and then stepped into the office, closing the door quietly behind her.

"I'm sorry to interrupt," she said.

"Not at all," Malone said. "It's a pleasure to have you. Come again soon." He smiled at her.

She didn't smile back. "Doctor," she said, "you better talk to Miss Thompson. I'm not at all sure what I can do. It's something new."

"New?" he said. The worry lines

on his face were increasing, but he spoke softly.

"The poor dear thinks she's going to get out of the hospital now," Miss Wilson said. "For some reason, she's convinced that the FBI is going to get her released, and—"

As she saw the expressions on three faces, she stopped.

"What's wrong?" she said.

"Miss Wilson," Malone said, "we . . . may I call you by your first name?"

"Of course, Mr. Malone," she said.

There was a little silence.

"Miss Wilson," Malone said, "what *is* your first name?"

She smiled now, very gently. Malone wanted to walk through mountains, or climb fire. He felt confused, but wonderful. "Barbara," she said.

"Lovely," he said. "Well, Barbara . . . and please call me Ken. It's short for Kenneth."

The smile on her face broadened. "I thought it might be," she said.

"Well," Malone said softly, "it is. Kenneth. That's my name. And you're Barbara."

Boyd cleared his throat.

"Ah," Malone said. "Yes. Of course. Well, Barbara . . . well, that's just what we intend to do. Take Miss Thompson away. We need her—badly."

Dr. Harman had said nothing at all, and had barely moved. He was staring at a point on his desk. "She couldn't possibly have heard us," he muttered. "That's a soundproof door. She couldn't have heard us."

"But you can't take Miss Thompson away," Miss Wilson said.

"We have to, Barbara," Malone said gently. "Try to understand. It's for the national security."

"She heard us thinking," Dr. Harman muttered. "That's what; she heard us thinking. Behind a soundproof door. She can see inside their minds. She can even see inside *my* mind."

"She's a sick woman," Barbara said.

"But you have to understand—"

"Vital necessity," Boyd put in. "Absolutely vital."

"Nevertheless—" Barbara said.

"She can read minds," Dr. Harman whispered in an awed tone. "She knows. Everything. She *knows.*"

"It's out of the question," Barbara said. "Whether you like it or not, Miss Thompson is not going to leave this hospital. Why, what could she do outside these walls? She hasn't left in over forty years! And furthermore, Mr. Malone—"

"Kenneth," Malone put in, as the door opened again. "I mean Ken."

The little old lady put her haloed head into the room. "Now, now, Barbara," she said. "Don't you go spoiling things. Just let these nice men take me away and everything will be fine, believe me. Besides, I've been outside more often than you imagine."

"Outside?" Barbara said.

"Of course," the little old lady said. "In other people's minds. Even

yours. I remember that nice young man . . . what was his name?"

"Never mind his name," Barbara said, flushing furiously.

Malone felt instantly jealous of every nice young man he had ever even heard of. *He* wasn't a nice young man; he was an FBI agent, and he liked to drink and smoke cigars and carouse.

All nice young men, he decided, should be turned into ugly old men as soon as possible. That'd fix them!

He noticed the little old lady smiling at him, and tried to change his thoughts rapidly. But the little old lady said nothing at all.

"At any rate," Barbara said, "I'm afraid that we just can't—"

Dr. Harman cleared his throat imperiously. It was a most impressive noise, and everyone turned to look at him. His face was a little gray, but he looked, otherwise, like a rather pudgy, blond, crew-cut Roman emperor.

"Just a moment," he said with dignity, "I think you're doing the United States of America a grave injustice, Miss Wilson—and that you're doing an injustice to Miss Thompson, too."

"What do you mean?" she said.

"I think it would be nice for her to get away from me—I mean from here," the psychiatrist said. "Where did you say you were taking her?" he asked Malone.

"Yucca Flats," Malone said.

"Ah." The news seemed to please the psychiatrist. "That's a long distance from here, isn't it? It's quite a few hundred miles away. Perhaps even a few thousand miles away. I feel sure that will be the best thing for me . . . I mean, of course, for Miss Thompson. I shall recommend that the court so order."

"Doctor—" But even Barbara saw, Malone could tell, that it was no good arguing with Dr. Harman. She tried a last attack. "Doctor, who's going to take care of her?"

A light the size and shape of North America burst in Malone's mind. He almost chortled. But he managed to keep his voice under control. "What she needs," he said, "is a trained psychiatric nurse."

Barbara Wilson gave him a look that had carloads of U_{235} stacked away in it, but Malone barely minded. She'd get over it, he told himself.

"Now, wasn't that sweet of you to think of that," the little old lady said. Malone looked at her and was rewarded with another wink.

"I'm certainly glad you thought of Barbara," the little old lady went on. "You will go with me won't you, dear? I'll make you a duchess. Wouldn't you like to be a duchess, dear?"

Barbara looked from Malone to the little old lady, and then she looked at Dr. Harman. Apparently what she saw failed to make her happy.

"We'll take good care of her, Barbara," Malone said.

She didn't even bother to give him an answer. After a second Boyd

said: "Well, I guess that settles it. If you'll let me use your phone, Dr. Harman, I'll call Judge Dunning."

"Go right ahead," Dr. Harman said. "Go right ahead."

The little old lady smiled softly without looking at anybody at all. "Won't it be wonderful," she whispered. "At last I've been recognized. My country is about to pay me for my services. My loyal subjects—" She stopped and wiped what Malone thought was a tear from one cornflower-blue eye.

"Now, now, Miss Thompson," Barbara said.

"I'm not sad," the little old lady said, smiling up at her. "I'm just so very happy. I am about to get my reward, my well-deserved reward at last, from all of my loyal subjects. You'll see." She paused and Malone felt a faint stirring of stark, chill fear.

"Won't it be wonderful?" said the little old lady.

IV

"You're *where?*" Andrew J. Burris said.

Malone looked at the surprised face on the screen and wished he hadn't called. He had to report in, of course—but, if he'd had any sense, he'd have ordered Boyd to do the job for him.

Oh, well, it was too late for that now. "I'm in Las Vegas," he said. "I tried to get you last night, but I couldn't, so I—"

"Las Vegas," Burris said. "Well, well. Las Vegas." His face darkened and his voice became very loud. "Why aren't you in Yucca Flats?" he screamed.

"Because she insisted on it," Malone said. "The old lady. Miss Thompson. She says there's another telepath here."

Burris closed his eyes. "Well, that's a relief," he said at last. "Somebody in one of the gambling houses, I suppose. Fine, Malone." He went right on without a pause: "The boys have uncovered two more in various parts of the nation. Not one of them is even close to sane." He opened his eyes. "Where's this one?" he said.

Malone sighed. "In the looney bin," he said.

Burris' eyes closed again. Malone waited in silence. At last Burris said: "All right. Get him out."

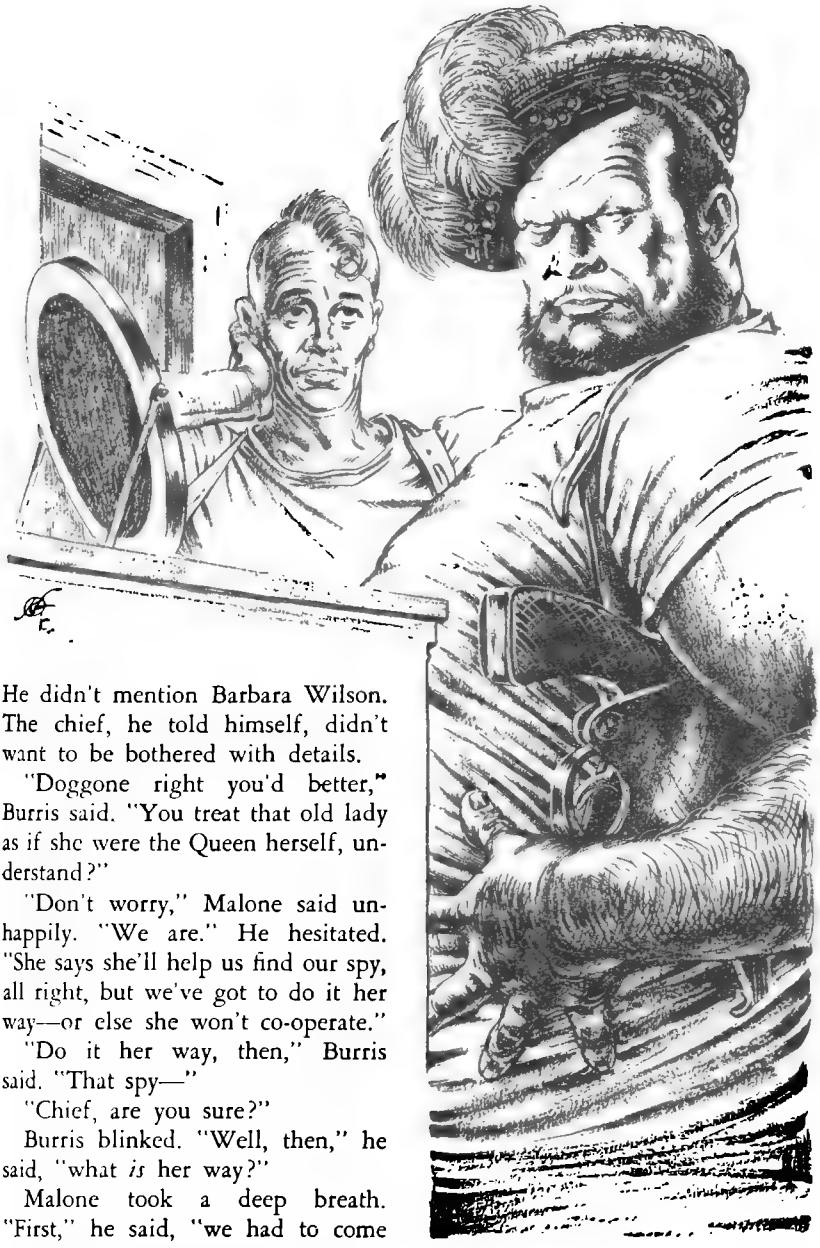
"Right," Malone said.

"Tell me," Burris said. "Why did Miss Thompson insist that you go to Las Vegas? Somebody else could have done the job. You could have sent Boyd, couldn't you?"

"Chief," Malone said slowly, "what sort of mental condition are those other telepaths in?"

"Pretty bad," Burris said. "As a matter of fact, very bad. Miss Thompson may be off her trolley, but the others haven't even got any tracks." He paused. "What's that got to do with it?" he said.

"Well," Malone said, "I figured we'd better handle Miss Thompson with kid gloves—at least until we find a better telepath to work with."



He didn't mention Barbara Wilson. The chief, he told himself, didn't want to be bothered with details.

"Doggone right you'd better," Burris said. "You treat that old lady as if she were the Queen herself, understand?"

"Don't worry," Malone said unhappily. "We are." He hesitated. "She says she'll help us find our spy, all right, but we've got to do it her way—or else she won't co-operate."

"Do it her way, then," Burris said. "That spy—"

"Chief, are you sure?"

Burris blinked. "Well, then," he said, "what *is* her way?"

Malone took a deep breath. "First," he said, "we had to come

here and pick this guy up. This William Logan, who's in a private sanitarium just outside of Las Vegas. That's number one. Miss Thompson wants to get all the telepaths together, so they can hold mental conversations or something."

"And all of them batty," Burris said.

"Sure," Malone said. "A convention of nuts—and me in the middle. Listen, chief—"

"Later," Burris said. "When this is over we can all resign, or go fishing, or just plain shoot ourselves. But right now the national security is primary, Malone. Remember that."

"O.K.," Malone sighed. "O.K. But she wants all the nuts here."

"Go along with her," Burris snapped. "Keep her happy. So far, Malone, she's the only lead we have on the guy who's swiping information from Yucca Flats. If she wants something, Malone, you do it."

"But, chief—"

"Don't interrupt me," Burris said. "If she wants to be treated like a queen, you treat her like one. Malone, that's an order!"

"Yes, sir," Malone said sadly. "But, chief, she wants us to buy her some new clothes."

Burris exploded: "Is that all? New clothes? Get 'em. Put 'em on the expense account. New clothes are a drop in the bucket."

"Well . . . she thinks we need new clothes, too."

"Maybe you do," Burris said. "Put the whole thing on the expense account. You don't think I'm going to quibble about a few dollars, do you?"

"Well—"

"Get the clothes. Just don't bother me with details like this. Handle the job yourself, Malone—you're in charge out there. And get to Yucca Flats as soon as possible."

Malone gave up. "Yes, sir," he said.

"All right, then," Burris said. "Call me tomorrow. Meanwhile—good luck, Malone. Chin up."

Malone said: "Yes, sir," and reached for the switch. But Burris' voice stopped him.

"Just one thing," he said.

"Yes, chief?" Malone said.

Burris frowned. "Don't spend any more for the clothes than you have to," he said.

Malone nodded, and cut off.

When the director's image had vanished, he got up and went to the window of the hotel room. Outside, a huge sign told the world, and Malone, that this was the Thunderbird-Hilton-Zeckendorf Hotel, but Malone ignored it. He didn't need a sign; he knew where he was.

In hot water, he thought. *That's* where he was.

Behind him, the door opened. Malone turned as Boyd came in.

"I found a costume shop, Ken," he said.

"Great," Malone said. "The chief authorized it."

"He did?" Boyd's round face fell at the news.

"He said to buy her whatever she wants. He says to treat her like a queen."

"That," Boyd said, "we're doing now."

"I know it," Malone said. "I know it altogether too well."

"Anyhow," Boyd said, brightening, "the costume shop doesn't do us any good. They've only got cowboy stuff and bullfighters' costumes and Mexican stuff—you know, for their Helldorado Week here."

"You didn't give up, did you?" Malone said.

Boyd shook his head. "Of course not," he said. "Ken, this is on the expense account, isn't it?"

"Expense account," Malone said. "Sure it is."

Boyd looked relieved. "Good," he said. "Because I had the proprietor phone her size in, to New York."

"Better get two of 'em," Malone said. "The chief said anything she wanted, she was supposed to have."

"I'll go back right away. I told him we wanted the stuff on the afternoon plane, so—"

"And give him Bar . . . Miss Wilson's size, and yours, and mine. Tell him to dig up something appropriate."

"For us?" Boyd blanched visibly.

"For us," Malone said grimly.

Boyd set his jaw. "No," he said.

"Listen, Tom," Malone said, "I don't like this any better than you do. But if I can't resign, you can't either. Costumes for everybody."

"But," Boyd said, and stopped. After a second he went on: "Malone . . . Ken . . . FBI agents are supposed to be inconspicuous, aren't they?"

Malone nodded.

"Well, how inconspicuous are we going to be in this stuff?"

"It's an idea," Malone said. "But it isn't a very good one. Our first job is to keep Miss Thompson happy. And that means costumes. And what's more," Malone added, "from now on she's 'Your Majesty'. Got that?"

"Ken," Boyd said, "you've gone nuts."

Malone shook his head. "No, I haven't," he said. "I just wish I had. It would be a relief."

"Me, too," Boyd said. He started for the door and turned. "I wish I could have stayed in San Francisco," he said. "Why should she insist on taking *me* along?"

"The beard," Malone said.

"*My* beard?" Boyd recoiled.

"Right," Malone said. "She says it reminds her of someone she knows. Frankly, it reminds me of someone, too. Only I don't know who."

Boyd gulped. "I'll shave it off," he said, with the air of a man who can do no more to propitiate the Gods.

"You will not," Malone said firmly. "Touch but a hair of yon black chin, and I'll peel off your entire skin."

Boyd winced.

"Now," Malone said, "go back to that costume shop and arrange things. Here." He fished in his pock-

ets, came out with a crumpled slip of paper and handed it to Boyd. "That's a list of my clothing sizes. Get another list from B . . . Miss Wilson." Boyd nodded. Malone thought he detected a strange glint in the other man's eye. "Don't measure her yourself," he said. "Just ask her."

Boyd scratched his bearded chin and nodded slowly. "All right, Ken," he said. "But if we just don't get anywhere, don't blame me."

"If you get anywhere," Malone said, "I'll snatch you baldheaded. And I'll leave the beard."

"I didn't mean with Miss Wilson, Ken," Boyd said. "I meant in general." He left, with the air of a man whose world has betrayed him. His back looked, to Malone, like the back of a man on his way to the scaffold or guillotine.

The door closed.

Now, Malone thought, who does that beard remind me of? Who do I know who knows Miss Thompson?

And what difference does it make?

Nevertheless, he told himself, Boyd's beard was really an admirable fact of nature. Ever since beards had become popular again in the mid-sixties, and FBI agents had been permitted to wear them, Malone had thought about growing one. But, somehow, it didn't seem right.

Now, looking at Boyd, he began to think about the prospect again.

He shrugged the notion away. There were things to do.

He picked up the phone and called Information.

"Can you give me," he said, "the number of the Desert Edge Sanitarium?"

The crimson blob of the setting sun was already painting the desert sky with its customary purples and oranges by the time the little caravan arrived at the Desert Edge Sanitarium, a square white building several miles out of Las Vegas. Malone, in the first car, wondered briefly about the kind of patients they catered to? People driven mad by vingt-et-un or poker-dice? Neurotic chorus ponies? Gambling czars with delusions of non-persecution?

Sitting in the front seat next to Boyd, he watched the unhappy San Francisco agent manipulating the wheel. In the back seat, Queen Elizabeth Thompson and Lady Barbara, the nurse, were located, and Her Majesty was chattering away like a magpie.

Malone eyed the rear-view mirror to get a look at the car following them and the two local FBI agents in it. They were, he thought, unbelievably lucky. He had to sit and listen to the Royal Personage in the back seat.

"Of course, as soon as Parliament convenes and recognizes me," she was saying, "I shall confer personages on all of you. Right now, the best I can do is to knight you all, and of course that's hardly enough. But I think I shall make Sir Kenneth the Duke of Columbia."

Sir Kenneth, Malone realized, was himself. He wondered how he'd like being Duke of Columbia—and wouldn't the President be surprised!

"And Sir Thomas," the queen continued, "will be the Duke of . . . what? Sir Thomas?"

"Yes, Your Majesty?" Boyd said, trying to sound both eager and properly respectful.

"What would you like to be Duke of?" she said.

"Oh," Boyd said after a second's thought, "anything that pleases Your Majesty." But, apparently, his thoughts gave him away.

"You're from upstate New York?" the Queen said. "How very nice. Then you must be made the Duke of Poughkeepsie."

"Thank you, Your Majesty," Boyd said. Malone thought he detected a note of pride in the man's voice, and shot a glance at Boyd, but the agent was driving with a serene face and an economy of motion.

Duke of Poughkeepsie! Malone thought. *Hah!*

He leaned back and adjusted his fur-trimmed coat. The plume that fell from his cap kept tickling his neck, and he brushed at it without success.

All four of the inhabitants of the car were dressed in late Sixteenth Century costumes, complete with ruffs and velvet and lace filigree. Her Majesty and Lady Barbara were wearing the full skirts and small skullcaps of the era—and on Barbara, Malone thought privately, the low-cut gowns didn't look at all disappointing—and Sir Thomas and Malone—Sir Kenneth, he thought sourly—were clad in doublet, hose and long coats with fur trim and slashed sleeves. And all of them were loaded down, weighted down, staggeringly, with gems.

Naturally, the gems were fake. But then, Malone thought, the Queen was mad. It all balanced out in the end.

As they approached the sanitarium, Malone breathed a thankful prayer that he'd called up to tell the head physician how they'd all be dressed. If he hadn't—

He didn't want to think about that.

He didn't even want to pass it by hurriedly on a dark night.

The head physician, Dr. Frederic Dowson, was waiting for them on the steps of the building. He was a tall, thin, cadaverous-looking man with almost no hair and very deep-sunken eyes. He had the kind of face that a gushing female would probably describe, Malone thought, as "craggy," but it didn't look in the least attractive to Malone. Instead, it looked tough and forbidding.

He didn't turn a hair as the magnificently robed Boyd slid from the front seat, opened the rear door, doffed his plumed hat, and in one low sweep made a great bow. "We are here, Your Majesty," Boyd said.

Her Majesty got out, clutching at her voluminous skirts in a worried manner, to keep from catching them on the door jamb. "You know, Sir

Thomas," she said when she was standing free of the car, "I think we must be related."

"Ah?" Boyd said worriedly.

"I'm certain of it, in fact," Her Majesty went on. "You look just exactly like my poor father. Just exactly. I dare say you come from one of the sinister branches of the family. Perhaps you are a half-brother of mine—removed, of course."

Malone grinned, and tried to hide the expression. Boyd was looking puzzled, then distantly angered. Nobody had ever called him illegitimate in just that way before.

But Her Majesty was absolutely right, Malone thought. The agent had always reminded him of someone, and now, at last, he knew exactly who. The hair hadn't been black, either, but red.

Boyd was, in Elizabethan costume, the deadest of dead ringers for Henry VIII.

Malone went up the steps to where Dr. Dowson was standing.

"I'm Malone," he said, checking a tendency to bow. "I called earlier today. Is this William Logan of yours ready to go? We can take him back with us in the second car."

Dr. Dowson compressed his lips and looked worried. "Come in, Mr. Malone," he said. He turned just as the second carload of FBI agents began emptying itself over the hospital grounds.

The entire procession filed into the hospital office, the two local agents bringing up the rear. Since they were not a part of Her Majesty's personal retinue, they had not been required to wear court costumes. In a way, Malone was beginning to feel sorry for them. He himself cut a nice figure in the outfit, he thought—rather like Errol Flynn in the old black-and-white print of "The Prince and the Pauper."

But there was no denying that the procession looked strange. File clerks and receptionists stopped their work to gape at the four bedizened walkers and their plainly dressed satellites. Malone needed no telepathic talent to tell what they were thinking.

"A whole roundup of nuts," they were thinking. "And those two fellows in the back must be bringing them in—along with Dr. Dowson."

Malone straightened his spine. Really, he didn't see why Elizabethan costumes had ever gone out of style. Elizabeth was back, wasn't she—either Elizabeth II, on the throne, or Elizabeth I, right behind him. Either way you looked at it—

When they were all inside the waiting room, Dr. Dowson said: "Now, Mr. Malone, just what is all this about?" He rubbed his long hands together. "I fail to see the humor of the situation."

"Humor?" Malone said.

"Doctor," Barbara Wilson began, "let me explain. You see—"

"These ridiculous costumes," Dr. Dowson said, waving a hand at them. "You may feel that poking fun at insanity is humorous, Mr. Malone, but let me tell you—"

"It wasn't like that at all," Boyd said.

"And," Dr. Dowson continued in a somewhat louder voice, "wanting to take Mr. Logan away from us. Mr. Logan is a very sick man, Mr. Malone. He should be properly cared for."

"I promise we'll take good care of him," Malone said earnestly. The Elizabethan clothes were fine outdoors, but in a heated room one had a tendency to sweat.

"I take leave to doubt that," Dr. Dowson said, eying their costumes pointedly.

"Miss Wilson here," Malone volunteered, "is a trained psychiatric nurse."

Barbara, in her gown, stepped forward. "Dr. Dowson," she said, "let me assure you that these costumes have their purpose. We—"

"Not only that," Malone said. "There are a group of trained men from St. Elizabeths Hospital in Washington who are going to take the best of care of him." He said nothing whatever about Yucca Flats, or about telepathy.

Why spread around information unnecessarily?

"But I don't understand," Dr. Dowson said. "What interest could the FBI have in an insane man?"

"That's none of your business," Malone said. He reached inside his fur-trimmed robe and, again suppressing a tendency to bow deeply, withdrew an impressive-looking legal document. "This," he said, "is a court order, instructing you to hand over to us the person of one William Logan, herein identified and described." He waved it at the doctor. "That's your William Logan," he said, "only now he's ours."

Dr. Dowson took the papers and put in some time frowning at them. Then he looked up again at Malone. "I assume that I have some discretion in this matter," he said. "And I wonder if you realize just how ill Mr. Logan is? We have his case histories here, and we have worked with him for some time."

Barbara Wilson said: "But—"

"I might say that we are beginning to understand his illness," Dr. Dowson said. "I honestly don't think it would be proper to transfer this work to another group of therapists. It might set his illness back—cause, as it were, a relapse. All our work could easily be nullified."

"Please, doctor," Barbara Wilson began.

"I'm afraid the court order's got to stand," Malone said. Privately, he felt sorry for Dr. Dowson, who was, obviously enough, a conscientious man trying to do the best he could for his patient. But—

"I'm sorry, Dr. Dowson," he said. "We'll expect you to send all of your data to the government psychiatrists —and, naturally, any concern for the patient's welfare will be our concern also. The FBI isn't anxious for its workers to get the reputation of careless men." He paused, wondering what other bone he could throw the man. "I have no doubt that the St.

Elizabeths men will be happy to accept your co-operation," he said at last. "But, I'm afraid that our duty is clear. William Logan goes with us."

Dr. Dowson looked at them sourly. "Does he have to get dressed up like a masquerade, too?" Before Malone could answer, the psychiatrist added: "Anyhow, I don't even know you're FBI men. After all, why should I comply with orders from a group of men, dressed insanely, whom I don't even know?"

Malone didn't say anything. He just got up and walked to a phone on a small table, near the wall. Next to it was a door, and Malone wondered uncomfortably what was behind it. Maybe Dr. Dowson had a small arsenal there, to protect his patients and prevent people from pirating them.

He looked back at the set and dialed Burris' private number in Washington. When the director's face appeared on the screen, Malone said: "Mr. Burris, will you please identify me to Dr. Dowson?" He looked over at Dowson. "You recognize Mr. Andrew J. Burris, I suppose?" he said.

Dowson nodded. His grim face showed a faint shock. He walked to the phone, and Malone stepped back to let him talk with Burris.

"My name is Dowson," he said. "I'm psychiatric director here at Desert Edge Sanitarium. And your men—"

"My men have orders to take a William Logan from your care," Burris said.

"That's right," Dowson said. "But—"

While they were talking, Queen Elizabeth I sidled quietly up to Malone and tapped him on the shoulder.

"Sir Kenneth," she whispered in the faintest of voices, "I know where your telepathic spy is. And I know *who* he is."

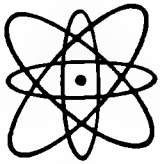
"Who?" Malone said. "What? Why? Where?" He blinked and whirled. It couldn't be true. They couldn't solve the case so easily.

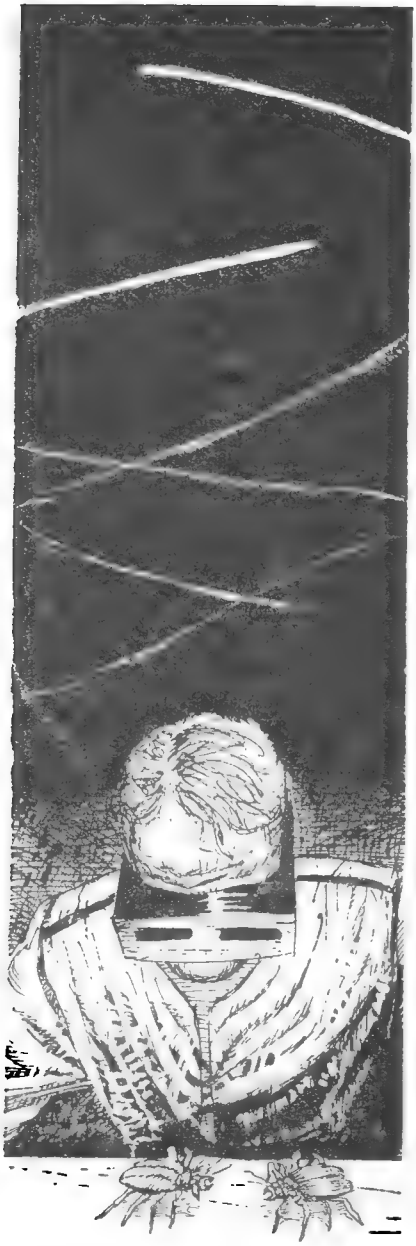
But the Queen's face was full of a majestic assurance. "He's right there," she said, and she pointed.

Malone followed her finger.

It was aimed directly at the glowing image of Andrew J. Burris, Director of the FBI.

TO BE CONCLUDED





CAPTIVE LEAVEN

BY CHRISTOPHER ANVIL

It's fairly easy to observe the effect of an idea, a new technology... but finding the source, and the reason for that source's actions may be quite impossible....

Illustrated by Summers

N THE dripping blackness, Dane turned slowly till the sliding sound grew loud in his earphones. He heard the faint hum that told him he was facing the source of the sound directly. Gently he squeezed the trigger.

There was a hiss that dwindled fast, then grew loud again in the phones.

Dane heard a dry cough and the clatter of equipment. He felt the magazine of the gun, and the three little studs told him there were three shots left. He moved his head, heard the slap of branches and the faint sounds of men moving through the brush out of range behind him.

Nearby in a fan tree, a night-watcher began its liquid warbling.

Dane dropped to the ground and crawled away through the brush toward the distant roar of the surf.

A buzzing whir circled and criss-crossed behind him. Back in the forest, someone shouted impatiently. A batlike flitting sound went past overhead, and Dane flattened himself against the earth.

There was a brilliant flash. The ground jumped under him, and there was a blast that hurt his ears. He lay still as dirt pattered down.

A voice shouted, "To your left! *There!*"

Dane pressed himself flatter.

There was another flash, farther away.

Dane turned slightly to glance up at the sky. He pried the face of his watch away from his wrist, and the glowing, slowly-turning numerals told him he had five hours left till dawn.

He listened carefully, then rose on one knee.

There was a sliding slipping sound in the brush in front of him.

He turned his head slowly, and rested his forearm on his bent knee as he carefully centered the gun on the sound and squeezed the trigger.

This time there was a gagging, and a wild thrashing that came to him in full detail before the cutout left him with only normal hearing. He took a shaking breath, then froze as a brilliant flash lit the brush and dead tree-limbs in a brief white glare.

The light died away, and Dane listened carefully to the darkness ahead of him. There was no sound of motion. He rose carefully and listened behind him. A multitude of men were rustling and clinking through the brush.

Dane turned again, felt of the two little studs on the magazine of his gun and started carefully in the direction of his last shot.

Overhead, the loud cry of a sea skimmer swept past, repeated over and over with the last note off key.

Dane dropped to the ground, his heart beating fast.

A pinpoint of light grew overhead, casting its pale glow over forest and wasteland. A glider swooped past, headed inland from the sea.

Dane counted ten slowly as he unclipped a bird's-egg grenade from

his belt, pulled the safety pin with his teeth, and lobbed the grenade out into the open.

There was a bright yellow flash.

From inland came shouts, the blast of a whistle, and scattered bursts of firing.

Dane tightened the strap of his light pack, put his gun flat on the ground, put grenade belt and listening apparatus on it, then forced back a plate on the side of the stock. He felt for a lever underneath, and waited tensely.

A second glider swooped down.

Dane thumbed back the lever, dodged through the brush, and sprinted for the glider.

A curved hatch on the glider swung open.

Dane swung a leg over, dropped inside and lay flat, gasping for breath.

There was a sharp blast as his equipment blew up.

Something whined past overhead.

The hatch dropped and latched.

There was a low roar. The glider rocked, rushed forward and up.

Through a transparent plate by his face, Dane could look down and see shadowy running figures on the ground below.

Then the dim light faded behind them and they were over the sea.

A voice spoke urgently, and for an instant, Dane didn't understand the words, "Did you get it?"

"Two," said Dane carefully. "In my pack."

"Good work."

Dane lay still, wondering that he had been away so long that his own tongue sounded strange to him. Then the blackness outside seemed to merge with a bone-weariness in Dane's limbs, and he fell through layers of darkness into a deep exhausted sleep.

He gradually became conscious of a low throbbing roar that grew, then faded, and of a rushing swooping motion like that felt by a man on skis. He drifted, half-asleep, till someone shook him by the shoulder and pointed out a double line of dim blue lights in the darkness below.

"There's a bimarine down there. We're going to try to land on it."

"I see."

"If we don't make it, they'll light the underside of the middeck. Swim toward it. They'll have boats out."

"All right."

"Here we go."

The glider seemed to hang motionless, then the row of lights tilted and grew larger. They slid past below. Then there was a roar in his ears, a moment of swirling blackness, and the lights were rushing toward him, flashing past on both sides. The glider tipped, bounced, and whirled to a stop. An instant later, the hatch was snapped open, and strong hands lifted Dane out.

There was a chill breeze in his face. The blue lights dimmed and faded out. Someone spoke out of the darkness, "Did you get him?"

"Yes, sir."

"I can't see a thing in this gloom. Hello, Dane?"

"Right here," said Dane.

"Put out a hand. We've changed the design of these ships since you left. You don't want to go over the side after you've lived through that."

Dane reached out, found a rough, calloused hand, and let himself be led past a place where the sound of rushing water came up from below. They went across a swaying gangplank, along a deck and into a dark corridor. Then a door opened into a small well-lighted room lined with books and maps. Two men at a round table to one side looked up as he came in. One man wore the uniform of a general. The other was a civilian, a man Dan recognized as Hoth, little changed from his appearance eight years ago, when Dane had seen him last. Both of the men looked tense.

Dane's guide, a bearish man in the uniform of a naval captain, said to Dane, "Here I leave you to a fate worse than life with the Flumerang— An interrogation by experts."

The general said, "Don't go, captain."

"I have to. Half their navy may be after us." He went out.

Dane glanced at Hoth, saw the suspense on the man's face, and wordlessly unbuckled his pack. He swung it free of his shoulders, set it on the table, and loosened the straps. He pulled out a roll of khaki-colored clothing, and carefully spread it out. Four small metal boxes were inside. He opened them and took out the soft cloth padding.

In two of the boxes were pairs of thick, plastic-rimmed spectacles. In the other two lay what looked like large beetles. One of these beetles was dull brown and ordinary in appearance. The other was blue and gold, with large strong jaws, as if for fighting.

The general carefully picked up the big-jawed beetle. He touched an edge of curving jaw with his finger. The flesh cut neatly, and a drop of blood oozed out.

Hoth said, "Where did you get them?"

"At the factory where I worked. I short-circuited a power line to get into the shipping section unnoticed."

"What was your job there?"

"I was in final assembly."

Hoth leaned forward. "Then you know how to put them together?"

"These two types. There may be others."

"Have you ever used one of them?"

"I stole one earlier, and practiced with it."

"The control unit is in the glasses?"

"Yes."

Hoth studied one of the pairs of glasses. Inset in the plastic were tiny bright oblongs. "Do you know how this works?"

"I know how to use it. But that's all."

"Can you show us?"

Dane nodded and sat down by the table. He took the heavy, plastic-framed glasses and slid them on. For a moment, there was a distortion due

to the slight curvature of the lenses. Then he tipped the brownish beetle out of its case and saw two superimposed scenes, as in a double exposure. One scene was his normal view of the two men before him. The other was an image of a sort of dark rolling plain.

Dane held his attention steadily on the second scene. His normal vision faded, and the rolling plain grew distinct and clear. He felt an instant's fear, and an urge to draw back. He held his attention steady. Then he seemed to be in the midst of the rolling plain. He willed himself to rise. The unfamiliar scene fell away, and came into perspective as the unrolled khaki clothing from his pack. For an instant, Dane hovered before the general and Hoth, his vision much the same as it normally was except that things seemed flatter, and the details unnaturally clear. There was no sound, and little sense of effort, so that it all seemed dreamlike.

He flew up, over the heads of the men, glanced at the shelves of books, circled the room like a swimmer gliding through a huge tank of clear water, then swung back over the desk and dropped down onto it.

Now, he reminded himself, came the end of the pleasant part and the beginning of the tricky part.

He turned to face a comparatively dim and featureless corner of the room, and tried to shift his attention back to his normal vision.

Nothing happened.

He tried steadily and firmly to will his attention back to his normal vision.

He couldn't do it.

He flew up to go to a darker corner of the room, and found himself facing a motionless figure wearing a pair of glittering plastic-framed glasses. This figure had a look of waxy immobility, its gaze remote and trancelike.

Dane fought off panic, dropped into a dark corner and waited tensely.

There was a total stillness, and after a long time a faint glimmer of light in the darkness. Dane held his attention firmly on that glimmer. The glimmer grew to a patch of light, then to vague forms huddled together. Dane focused hard on these forms, trying to make them clear and distinct. He could vaguely see two men seated at a table. Slowly his vision cleared, sharpened, and he saw them plainly and saw nothing else.

Dane's hands and feet tingled. He drew in a long deep breath, took off his glasses, stooped and found the beetle. He put it in its box and looked up.

Hoth said, "Is it all right for us to try it?"

Dane explained what he had just been through, and Hoth nodded. "We'd better try that later." He glanced at his watch, and said sympathetically, "You must be tired out."

The general said, "I would like to ask just one question." He looked at Dane intently. "*When?*"

Dane thought a moment. "I'd guess about a year."

"Why not in a month?"

"I can only judge by the way they're expanding their productive facilities, and by the fact that they've only begun to prepare the attitudes of their people for a war with us. Then too, they're bound to think that their production of these devices will make them much stronger in a year than us."

The general nodded. "That's how we figure it."

Hoth said, "I'll show you to your cabin. Tomorrow will be strenuous, so you'll need plenty of sleep."

Dane lay down and promptly fell asleep listening to the throb of the ship's engines. He was soon jarred awake by a violent concussion. He heard a howl of machinery and a creak from steel deck and bulkheads. He gripped the cot with both hands and hung on as the ship swerved sharply.

The blast and shock seemed to go on forever. When it ended, Dane found himself worn out, but unable to sleep. His thoughts drifted to the last time he had seen Hoth, in a coastal trader working toward the southwest peninsula of Flumerang. Hoth had been urgent in explaining to Dane that his job was an important one.

"Remember, Dane," said Hoth earnestly, "each year we slip ashore at various points on the globe, two-to-three-hundred men and women whose only purpose is to act as potential probes. Many of these people we don't hear from for years. They settle down in an identity prepared for them by our people already established. When they're sure of their dialect and local background, they drift inland. If nothing happens, they become part of the population they're assigned to. Traders, merchants, technicians—even local government officials. It then seems like a pointless waste of effort on our part. But if they scent something, or if we do and call for action, then all the time and work pays off."

"I understand," said Dane.

"Good. And bear in mind, it's a wearing thing to feel that your life is ticking away while you wait for something that may never happen. *Don't* wait. Live your life and make yourself useful. Remember, the people of Flumerang are just as human and worthwhile as our own. But in case you sense anything, or if we call for you, *keep yourself ready.*"

Lying in the blackness of the cabin on the ship headed for home, Dane thought over his experiences in Flumerang and was surprised to realize that what Hoth said had been exactly true. Regardless of what the official propaganda of both sides would say in a few weeks or months, the people of Flumerang were much like his own people. There was, it was true, a certain combination of earthiness and innocence that differed from the dry realism he had grown up with; but even in this there were similarities.

Dane remembered walking one

evening across a meadow with a dark-haired girl who suddenly stopped to look up at the stars. "I wonder what's up there?"

"Who knows?" said Dane.

"My grandmother says there are people like us, just like on the other side of the world. Even the priest says the *Fiery Ship* sailed from a star."

The back of Dane's neck tingled. The legend of the *Fiery Ship* was one he had often heard at home. Unbidden, a rhyme Dane had learned as a child sang itself in his head:

"A ship of fire sailed the sky
To bear its gifts to you and I
From a star far away,
For that ship, dear God, we pray."

Dane was trying to phrase the rhyme in the Flumerang tongue to repeat it to the girl, when she gripped his hand. "Priest says the crew of the *Ship* is still living with us, and some day we'll all be children of the ship and they will take us back to the star with them. Do you believe that?"

Dane rolled over in the dark cabin and sat up.

After a long moment, he lay back down again, and finally fell into a troubled and restless sleep.

He woke up with a feeling of impatience and dissatisfaction. He washed, dressed, and moodily walked out onto the middeck to watch the ocean rushing back between the twin bows. Hoth led him off to a

hasty breakfast, then they got started.

The first part of the day passed in an interrogation that narrowed from generalities to key particulars, and brought Dane to the limits of memory. That afternoon, he was questioned in a state of drug hypnosis about details he couldn't consciously recall. That evening, the three men sat around a table and went over the results.

"I think," said Hoth, "that we can build copies of this device. But we won't have time enough to come anywhere near the Flumerang rate of production."

The general nodded. "In that case we're in a mess. This thing will revolutionize reconnaissance. It can plainly be fitted for use as a weapon. It could be issued as standard equipment for spies to infiltrate our research centers. And, as usual, we can't oppose it directly."

Hoth said, "The production of this device seems to have started in their western province and moved from there to the capital. The only hopeful sign is that they are apparently restricting the device to a small elite."

"If," said the general, "we can get at that elite, and its source—"

Hoth nodded. "I think we're going to have to use a complex cutting-out operation, and use it on a grand scale."

Dane tapped the box containing the blue-and-gold beetle. "These things are going to make that approach even trickier than usual."

Hoth nodded. "I know it. But the only alternative is a ruinous war. A war *may* follow, anyway; but if we judge the Flumerang government correctly, it will follow immediately. If so, they'll be fighting blind and off-balance, so we should win quickly."

"Which," said Dane dryly, "should give us time to get ready for the next one."

The general shrugged. "We're the dominant power, and we can count on being disliked, distrusted, and sniped at, for just as long as we stay on top. Afterwards, they'll spit on us."

Hoth growled, "And that knowledge is a powerful stimulant."

"That's true," said Dane, "but what puzzles me is this—individually, they're nice people."

"Sure," said the general, "and the executioner may be a nice fellow socially. It's when you meet him in his official capacity that the unpleasantness comes."

"Maybe that's it," said Dane. "We always come up against other nations in their official capacities."

Hoth shrugged and looked at the blue-and-gold device with its curved, razor-sharp jaws. "I don't care to meet this thing in its official capacity."

Dane and the general followed Hoth's gaze and nodded.

The following months passed in gruelling work. Dane struggled to develop counter-measures, and was repeatedly called on to help solve

production difficulties in turning out a unit similar to that of the Flumerang. He was able to help with practical problems, but could only shrug when frustrated engineers told him, among other things, that the electrical circuits of the device defied understanding, and appeared to include the electrical properties of the unit's mechanical parts. But despite the theoretical difficulties, production gradually got under way.

As the first of their own units were produced, Dane practiced hour after hour, and when he was satisfied with his own skill, he helped train a crew of operators.

By this time, Hoth had a big board in his office covered with stolen samples of the Flumerang device. He showed them to Dane one day, pointing out samples bearing small drills and cutters, little tubes of explosive, miniature torches, sharp double-edged blades, and mechanical stings capable of injecting narcotic drugs or poison.

"Look," said Hoth, "at this thing." He pointed to a beetle with the bristly appearance of a burr. "That's the latest type. It's designed to cling to clothing. It contains a small explosive charge and blows up if the shell is distorted. The natural instinct of any man with a burr stuck on him is to pull it loose. In this case, that is likely to lose him his hand."

Dane said, "Exactly how are we going to run a cutting-out operation in a country swarming with these things?"

"At night," said Hoth. "They don't have anything yet that can see at night, and I am not going to wait till they invent something that can." He pulled out a big map and spread it on his desk. "Our main trouble is here, in this industrial town south of the capital. That is where the people live who design these things. But the main source of this nest of geniuses is further west, in the teachers of one outstanding technical school in this town near the coast. Happily, we've put quite a number of probes into Flumerang over the past few decades, so we've been able to get pretty close to their organization."

"All the same," said Dane, "I don't see how we are going to get a sizable force into those cities. The streets are lighted at night, and some intersections are floodlit. There is a continuous surveillance of all movements. I don't see how we can do it that way, night or no night."

Hoth nodded. "It will be tricky. But you have to remember, Flumerang is still ruled by the bunch that ruled it before. The device is a striking technological development. But the genius is in the Flumerang scientists and technicians, not in their government. Their government is using the device in a strictly conventional way, for purposes of war and internal control."

"True," said Dane, "but why should that help us?"

"Because," said Hoth, "war and internal control require stronger cen-

tralization. And that gives us an opening."

Hoth explained his plan, and ended by saying, "You see what that involves. Do you think we can do it?"

Dane thought it over. "Just let there be enough time for practice."

Dane lay in the blackness on the hillside, looking down on the lights of the town below. He carefully wormed his way between several low shrubs, then pried the face of his watch away from his wrist, and took a container from his pack. He unrolled a band of cloth, and set a small object outside the shrubs on the sparse dry grass. Then he carefully slid the band of cloth over his head, feeling till it fit smoothly at his forehead. He lay face down and shut his eyes.

All was darkness and intense silence around him. Then he saw a faint reflection, rose and turned, toward the lights of the city. He soared straight out over it, watching rectangles of darkness come into focus between lanes and pools of light. He looked down, circling slowly toward a lighted avenue that passed an angled block of darkness lit brightly at each corner.

As he dropped closer, he could see details in the avenue. He hovered and watched as a lone bent figure shuffled forward into the pool of light.

At the edge of the city, there was a bright flash and the streetlights below Dane went out. The lights at the building below faded out, then came on more dimly. Dane slipped down toward the light.

The bent figure was that of an old woman, talking through a grille to a scowling guard.

A small black shadow flicked from her outstretched hand. The guard stiffened. Dane watched the shadows on the old woman's face. She seemed to be talking steadily, persuasively.

The guard pressed a button, and spoke into a phone. The old woman shuffled toward a door of the building. The door opened. A frowning guard stepped out. At that moment, the clapper of a bell above the doorway blurred. Several small vague forms dropped into the light and clung to the woman's shawl. The cloth moved as she turned her head. There was a bright flash, then another and another.

As she fell, small shadows like darting minnows flicked away from her toward the open door. The guard there toppled forward, and there were two forms lying motionless in the pool of light.

Dane dropped fast, and streaked through the doorway and down a hall. He shot up a broad staircase, and saw a man before a closed door, his eyes wide behind a pair of heavy, plastic-framed glasses.

Dane streaked for the man.

Three blue-black streaks blurred up the staircase toward the door.

Dane struck the man at the base of his neck. He stumbled, his expression suddenly vague. Then he

lost his balance and toppled at the head of the stairs.

There was a bright flash, then another.

The door sagged on one hinge.

Down the hall, streaked a small blue-and-gold blur that swerved and dove at Dane with a sharp silvery glitter.

Dane dove, then climbed fast toward the doorway.

Another blue-and-gold streak shot past him, then another. Tangled blurs whizzed down the hall, whirled and dove after him as he flashed past the door.

In the room, tense men lay on bunks, each wearing the heavy glasses. Little blue-black forms dove at one after another, and each in turn lost his look of intense concentration.

Dane dove at several of the remaining men, each hard contact triggering the release of a minute quantity of quick-acting narcotic.

He streaked upward, and saw that the blue-and-gold Flumerang devices were all scattered on the floor.

Dane circled, waiting. Without hearing, he had no way to tell if the sirens of captured police trucks were sounding outside or not. He was painfully aware that part of the plan could have failed completely, and then all the rest would be for nothing.

He waited in growing anxiety.

Then the door flew back, and tough-looking men in the uniforms of the Flumerang National Police burst in. They seized the unconscious men from their cots, carried them out, and down the stairs into waiting trucks.

Dane swung up fast into the night, circled to get his bearings, then climbed toward the distant hills.

Dane and the rest of the men were back on the ship before dawn. As the captives were taken below, Dane reported to Hoth.

Hoth listened carefully, then said, "Good work. With the other reports I've had, this means we've got the key scientific personnel, and the bulk of their elite of operators. Just in time, too." He tossed across a bulky sheaf of papers.

Dane glanced through diagrams, charts, and orders in the Flumerang tongue. He studied with particular care a map showing his homeland divided up into occupation districts.

Hoth said, "Now they can either attack us, in which case they fight disorganized, or they can wait, in which case our own production will outstrip theirs."

"But in any case," said Dane, "we can expect another upheaval sooner or later, here or elsewhere."

"Yes," said Hoth, "and we can hope our probes sense it before it gathers momentum." He looked at Dane intently. "We stop most of them before they get to this stage, you know."

"Yes," said Dane, "but I wonder about the whole thing. Suppose, as some people say, there are other

planets which have human life. Say there are thousands of these planets. I wonder if even one of them has a nation like ours?"

"What do you mean?"

"Well, other countries have spy networks, to snoop out secrets. *We* have individual probes, alert to sense any ferment of ideas, then locate the source. It seems natural, because I'm used to it. But when I stop to think of it, then it seems odd."

"It works."

"Yes, but *why?* Why is there this cleavage between the average person or situation and the dangerous one we're trained to sense? Why is it we usually find someone—or at most just a few—individuals at the center of a sort of whirlwind of ideas, which speedily develops into a hurricane if we don't get to it when it's little? I realize, experience shows it works this way, but experience doesn't tell *why.*"

"Maybe," said Hoth, "our situation is unusual."

"How so?"

Hoth grinned. "When I was a young man, filled with natural conceit and a keen awareness of my own superiority, my long-suffering superiors assigned me to Tongobokku—I think to take some of the edge off. Tongobokku has a climate like the inside of a steam boiler. The place is infested with land crabs, carnivorous trees, man-eating lung spiders, leeches, stinging and biting insects, and parasites of all varieties. In short, a real hell hole. The chance of anyone having leisure to get an idea in this place seemed negligible to me. But while I was there I heard what might be an answer to your question."

"What was that?" said Dane, leaning forward.

"A sort of song the children used to chant. I can only suppose it has to do with the *Fiery Ship,* but from a different angle than usual." Hoth leaned back, glanced into the distance for a moment, then began to repeat in a singsong voice:

"Strangers come in big canoe
That float up in the sky.
They come down, step out here
Though I cannot say why.
Ask me much, lips tight shut
And glare me in the eye.
You got water catch on fire?
No.
No? You got air that burn?
No.
No! You got stone that light like sun?
No.
No. You know how we get out out this place?
Me no know.
O.K. You got thin-fine very-strong bend-easy?
No.
You tell us where we get?
Me no know.
Everybody else this place all the same like you?
Me no know.
You ever see canoe like this?
No.
You see man fly in air?
No.

You see big hut swim in sea?
No.
Carramba sun a beach!
Same as the rest.
Now we had it.
Start from the bottom and work up.
So long, Bud. You'll be seeing us around."

Hoth paused, and Dane stared.

"There," said Hoth, "we have a possible answer."

"The *Fiery Ship* got *stuck* here. Ran out of fuel or some necessity—?"

Hoth smiled. "The production of a little precise part can require a whole worldwide technology to support it."

"What a fate," said Dane. "To have to uplift a whole planet in order to get off it."

"It's worse for them than that," said Hoth. "We don't know if we're dealing with people having a supernatural life span or with their descendants, or what. It's nice of them to inspire us and to prod our technology along. But we're keeping a close watch on things, and the price they have to pay runs higher."

"What's that?"

"When they lift," said Hoth, "*we* lift with them."

Dane grinned. He thought of the Flumerang girl who wanted to join the people of the *Fiery Ship* in the stars.

"Who knows?" he thought.

THE END

IN TIMES TO COME

The lead—and cover—yarn next time is Christopher Anvil's item entitled "The Law Breakers." Guilty of breaking and entering—i.e., they were aliens, and they broke into Earth with intent to commit sabotage.

Oh, well . . . you know what happens to aliens in Anvil's yarns. The fun is precisely how, in what degree, and with what result. In this case . . . never were saboteurs so welcomed! Only you wouldn't guess how or why.

Also coming: "Dodkin's Job," by Jack Vance. This one is concerned with the extreme difficulty of finding out who runs the joint . . . when the joint, that is the culture, is very, very complex. It gets difficult to tell the janitor from the President, you know . . .

THE EDITOR.

A MATTER

BY MURRAY LEINSTER

The importance of a matter is almost entirely a matter of your attitude. And whether you call something "a riot" or "a war" ...well, there is a difference, but what is it?

Illustrated by Bernklau

OF IMPORTANCE

OBODY ever saw the message-torp. It wasn't to be expected. It came in on a course that extended backward to somewhere near the Rift—where there used to be Huks—and for a very, very long way it had traveled as only message-torps do travel. It hopped half a light-year in overdrive, and came back to normality long enough for its photocells to inspect the star-filled universe all about. Then it hopped another half light-year, and so on. For a long, long time it traveled in this jerky fashion.

Eventually, moving as it did in the straightest of straight lines, its photocells reported that it neared a star which had achieved first-magnitude brightness. It paused a little longer than usual while its action-circuits shifted. Then it swung to aim for the bright star, which was the sol-type sun Varenga. The torp sped toward it on a new schedule. Its overdrive hops dropped to light-month length. Its pauses in normality were longer. They lasted almost the fiftieth of a second.

When Varenga had reached a suitably greater brightness in the message-torp's estimation, it paused long enough to blast out its recorded message. It had been designed for this purpose and no other. Its overdrive hops shortened to one light-hour of distance covered. Regularly, its transmitter flung out a repetition of what it had been sent so far to say. In time it arrived within the limits of the Varenga system. Its hops diminished to light-minutes of distance only. It ceased to correct its course. It hurtled through the orbits of all the planets, uttering silently screamed duplicates of the broadcasts now left behind, to arrive later.

It did not fall into the sun, of course. The odds were infinitely against such a happening. It pounded past the sun, shrieking its news, and hurtled on out to the illimitable emptiness beyond. It was still squealing when it went out of human knowledge forever.

The state of things was routine. Sergeant Madden had the traffic desk that morning. He would reach re-

tirement age in two more years, and it was a nagging reminder that he grew old. He didn't like it. There was another matter. His son Timmy had a girl, and she was on the way to Varenga IV on the *Cerberus,* and when she arrived Timmy would become a married man. Sergeant Madden contemplated this prospect. By the time his retirement came up, in the ordinary course of events he could very well be a grandfather. He was unable to imagine it. He rumbled to himself.

The telefax hummed and ejected a sheet of paper on top of other sheets in the desk's "In" cubicle. Sergeant Madden glanced absently at it. It was an operations-report sheet, to be referred to if necessary, but otherwise simply to be filed at the end of the day.

A voice crackled overhead.

"Attention Traffic," said the voice. *"The following report has been received and verified as off-planet. Message follows."* That voice ceased and was replaced by another, which wavered and wabbled from the electron-spurts normal to solar systems and which make for auroras on planets. *"Mayday mayday mayday,"* said the second voice. *"Call for help. Call for help. Ship* Cerberus *major breakdown overdrive heading Procyron III for refuge. Help urgently needed."* There was a pause. *"Mayday mayday mayday. Call for help—"*

Sergeant Madden's face went blank. Timmy's girl was on the *Cerberus.* Then he growled and riffled swiftly through the operations-report sheets that had come in since his tour of duty began. He found the one he looked for. Yes. Patrolman Timothy Madden was now in overdrive in squad ship 740, delivering the monthly precinct report to Headquarters. He would be back in eight days. Maybe a trifle less, with his girl due to arrive on the *Cerberus* in nine and him to be married in ten. But—

Sergeant Madden swore. As a prospective bridegroom, Timmy's place was on this call for help to the *Cerberus.* But he wasn't available. It was in his line, because it was specifically a traffic job. The cops handled traffic, naturally, as they handled sanitary-code enforcement and delinks and mercantile offenses and murderers and swindlers and missing persons. Everything was dumped on the cops. They'd even handled the Huks in time gone by—which in still earlier times would have been called a space war and put down in all the history books. It was routine for the cops to handle the disabled or partly disabled *Cerberus.*

Sergeant Madden pushed a button marked *"Traffic Emergency"* and held it down until it lighted.

"You got that *Cerberus* report?" he demanded of the air about him.

"Just," said a voice overhead.

"What've you got on hand?" demanded Sergeant Madden.

"The *Aldeb*'s here," said the voice. "There's a minor overhaul going on, but we can get her going in

six hours. She's slow, but you know her."

"Hm-m-m. Yeah," said Sergeant Madden. He added vexedly: "My son Timmy's girl is on board the *Cerberus*. He'll be wild he wasn't here. I'm going to take the ready squad ship and go on out. Passengers always fret when there's trouble and no cop around. Too bad Timmy's off on assignment."

"Yeah," said the Traffic Emergency voice. "Too bad. But we'll get the *Aldeb* off in six hours."

Sergeant Madden pushed another button. It lighted.

"Madden," he rumbled. "Desk. The *Cerberus*' had a breakdown. She's limpin' over to Procyron III for refuge to wait for help. The *Aldeb*'ll do the job on her, but I'm going to ride the squad ship out and make up the report. Who's next on call-duty?"

"Willis," said a crisp voice. "Squad ship 390. He's up for next call. Playing squint-eye in the squad room now."

"Pull him loose," Sergeant Madden ordered, "and send somebody to take the desk. Tell Willis I'll be on the tarmac in five minutes."

"Check," said the crisp voice.

Sergeant Madden lifted his thumb. All this was standard operational procedure. A man had the desk. An emergency call came in. That man took it and somebody else took the desk. Eminently fair. No favoritism; no throwing weight around; no glory-grabbing. Not that there was much glory in being a cop. But as long as a man was a cop, he was good. Sergeant Madden reflected with satisfaction that even if he was getting on to retirement age, he was still a cop.

He made two more calls. One was to Records for the customary full information on the *Cerberus* and on the Procyron system. The other was to the flat where Timmy lived with him. It was going to be lonely when Timmy got married and had a home of his own. Sergeant Madden dialed for message-recording and gruffly left word for Timmy. He, Timmy's father, was going on ahead to make the report on the *Cerberus*. Timmy wasn't to worry. The ship might be a few days late, but Timmy'd better make the most of them. He'd be married a long time!

Sergeant Madden got up, grunting, from his chair. Somebody came in to take over the desk. Sergeant Madden nodded and waved his hand. He went out and took the slide-stair down to the tarmac where squad ship 390 waited in standard police readiness. Patrolman Willis arrived at the stubby little craft seconds after the sergeant.

"Procyron III," said Sergeant Madden, rumbling. "I figure three days. You told your wife?"

"I called," said Patrolman Willis resignedly.

They climbed into the squad ship. Police ships, naturally, had their special drive, which could lift them off without rocket aid and gave them plenty of speed, but filled up the hull with so much machinery that it was

only practical for such ships. Commercial craft were satisfied with low-power drives, which meant that spaceport facilities lifted them to space and pulled them down again. They carried rockets for emergency landing, but the main thing was that they had a profitable pay load. Squad ships didn't carry anything but two men and their equipment.

Sergeant Madden dogged the door shut. The ship fell up toward the sky. The heavens became that blackness-studded-with-jewels which is space. A great yellow sun flared astern. A half-bright, half-dark globe lay below—the planet Varenga IV, on which the precinct police station for this part of the galaxy had its location.

Patrolman Willis, frowning with care, established the squad ship's direction, while Sergeant Madden observed without seeming to do so. Presently Patrolman Willis pushed a button. The squad ship went into overdrive.

It was perfectly commonplace in all its aspects.

The galaxy went about its business. Stars shone, and planets moved around them, and double stars circled each other like waltzing couples. There were also comets and meteors and calcium-clouds and high-energy free nuclei, all of which acted as was appropriate for them. On some millions of planets winds blew and various organisms practiced photosynthesis. Waves ran across seas. Clouds formed and poured down rain. On the relatively small number of worlds so far inhabited by humans, people went about their business with no thought for such things or anything not immediately affecting their lives. And the cops went about their business.

Sergeant Madden dozed most of the first day of overdrive travel. He had nothing urgent to do, as yet. This was only a routine trip. The *Cerberus* had had a breakdown in her overdrive. Commercial ships' drives being what they were, it meant that on her emergency drive she could only limp along at maybe eight or ten lights. Which meant years to port, with neither food nor air for the journey. But it was not even conceivable to rendezvous with a rescue ship in the emptiness between stars. So the *Cerberus* had sent a message-torp and was crawling to a refuge-planet, more or less surveyed a hundred years before. There she would land by emergency rockets, because her drive couldn't take the strain. Once aground, the *Cerberus* should wait for help. There was nothing else to be done. But everything was nicely in hand. The squad ship headed briskly for the planet Procyron III, and Sergeant Madden would take the data for a proper, official, emergency-call traffic report on the incident, and in time the *Aldeb* would turn up and make emergency repairs and see the *Cerberus* out to space again and headed for port once more.

This was absolutely all that there was to anticipate. Traffic handled

such events as a matter of course. So Sergeant Madden dozed during most of the first day of overdrive. He reflected somnolently when awake that it was fitting for Timmy's father to be on the job when Timmy's girl was in difficulty, since Timmy was off somewhere else.

On the second day he conversed more or less with Patrolman Willis. Willis was a young cop, almost as young as Timmy. He took himself very seriously. When Sergeant Madden reached for the briefing-data, he found it disturbed. Willis had read up on the kind of ship the *Cerberus* was, and on the characteristics of Procyron III as recorded a century before. The *Cerberus* was a semi-freighter, Candless type. Procyron III was a water-planet with less than ten per cent of land. Which was unfortunate, because its average temperature and orbit made it highly suitable for human occupation. Had the ten per cent of solid ground been in one piece, it would doubtless have been colonized. But the ground was an archipelago.

"Hm-m-m," said Sergeant Madden, after reading. "The survey recommends this northern island for emergency landing. Eh?"

Willis nodded. "Huks used to use it. Not the island. The planet."

Sergeant Madden yawned. It seemed pathetic to him that young cops like Willis and even Timmy referred so often to Huks. There weren't any, any more. Being a cop meant carrying out purely routine tasks, nowadays. They were important tasks, of course. Without the cops, there couldn't be any civilization. But Willis and Timmy didn't think of it that way. Not yet. To them being a cop was still a matter of glamour rather than routine. They probably even regretted the absence of Huks. But when a man reached Sergeant Madden's age, glamour didn't matter. He had to remember that his job was worth doing, in itself.

"Yeah," said Sergeant. Madden. "There was quite a time with those Huks."

"Did you . . . did you ever see a Huk, sir?" asked Willis.

"Before my time," said Sergeant Madden. "But I've talked to men who worked on the case."

It did not occur to him that the Huks would hardly have been called a "case" by anybody but a cop. When human colonies spread through this sector, they encountered an alien civilization. By old-time standards, it was quite a culture. The Huks had a good technology, they had spaceships, and they were just beginning to expand, themselves, from their own home planet or planets. If they'd had a few more centuries of development, they might have been a menace to humanity. But the humans got started first.

There being no longer any armies or navies when the Huks were discovered, the matter of intelligent nonhumans was a matter for the cops. So the police matter-of-factly tried to incorporate the Huk culture

into the human. They explained the rules by which human civilization worked. They painstakingly tried to arrange a sub-precinct station on the largest Huk home planet, with Huk cops in charge. They made it clear that they had nothing to do with politics and were simply concerned with protecting civilized people from those in their midst who didn't want to be civilized.

The Huks wouldn't have it. They bristled, proudly. They were defiant. They considered themselves not only as good as humans—the cops didn't care what they thought—but they insisted on acting as if they were better.

They reacted, in fact, as humans would have done if just at the beginning of their conquest of the stars, they'd run into an expanding, farther-advanced race which tried to tell them what they had to do. The Huks fought.

"They fought pretty good," said Sergeant Madden tolerantly. "Not killer-fashion—like delinks. The Force had to give 'em the choice of joining up or getting out. Took years to get 'em out. Had to use all the off-duty men from six precincts to handle the last riot."

The conflict he called a riot would have been termed a space battle by a navy or an army. But the cops operated within a strictly police frame of reference, which was the reverse of military. They weren't trying to subjugate the Huks, but to make them behave. In consequence, their tactics were unfathomable to the Huks—who thought in military terms. Squadrons of police ships which would have seemed ridiculous to a fighting-force commander threw the Huks off-balance, kept them off-balance, did a scrupulous minimum of damage to them, and thereby kept out of every trap the Huks set for them. In the end the cops supervised and assisted at the embittered, rebellious emigration of a race. The Huks took off for the far side of the galaxy. They'd neither been conquered nor exterminated. But Sergeant Madden thought of the decisive fracas as a riot rather than a battle.

"Yeah," he repeated. "They acted a lot like delinks."

Patrolman Willis spoke with some heat about delinks, who are the bane of all police forces everywhere. They practice adolescent behavior even after they grow up—but they never grow up. It is delinks who put stink-bombs in public places and write threatening letters and give warnings of bombs about to go off—and sometimes set them—and stuff dirt into cold rocket-nozzles and sometimes kill people and go incontinently hysterical because they didn't mean to. Delinks do most of the damaging things that have no sense to them. There is no cop who has not wanted to kill some grinning, half-scared, half-defiant delink who hasn't yet realized that he's destroyed half a million credits' worth of property or crippled somebody for life—for no reason at all.

Sergeant Madden listened to the

denunciation of all the delink tribe. Then he yawned again.

"I know!" he said. "I don't like 'em either. But we got 'em. We always will have 'em. Like old age."

Then he made computations with a stubby pencil and asked reflectively:

"When're you coming out of overdrive?"

Patrolman Willis told him. Sergeant Madden nodded.

"I'll take another nap," he observed. "We'll be there a good twenty-two hours before the *Aldeb*."

The little squad ship went on at an improbable multiple of the speed of light. After all, this was a perfectly normal performance. Just an ordinary bit of business for the cops.

Sergeant Madden belched when the squad ship came out of overdrive. He watched with seeming indifference while Patrolman Willis took a spectro on the star ahead and to the left, and painstakingly compared the reading with the ancient survey-data on the Procyron system. It had to match, of course, unless there'd been extraordinarily bad astrogation.

Willis put the spectroscope away, estimated for himself, and then checked with the dial that indicated the brightness of the still point-sized star. He said:

"Four light-weeks, I make it."

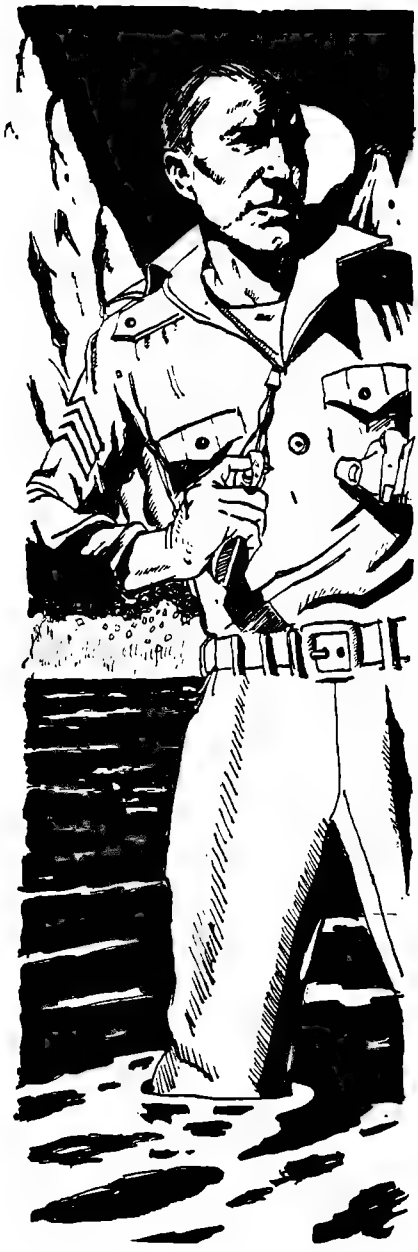
Sergeant Madden nodded. A superior officer should never do anything useful, so long as a subordinate isn't making a serious mistake. That is the way subordinates are trained to become superiors, in time. Patrolman Willis set a time-switch and pushed the overdrive button. The squad ship hopped, and abruptly the local sun had a perceptible disk. Willis made the usual tests for direction of rotation, to get the ecliptic plane. He began to search for planets. As he found them, he checked with the reference data. All this was tedious. Sergeant Madden grunted:

"That'll be it," he said, and pointed. "Water world. It's the color of ocean. Try it."

Patrolman Willis threw on the telescope screen. The image of the distant planet leaped into view. It was Procyron III. The spiral cloud-arms of a considerable storm showed in the southern hemisphere, but in the north there was a group of specks which would be the planet's only solid ground—the archipelago reported by the century-old survey. The *Cerberus* should have been the first ship to land there in a hundred years, and the squad ship should be the second.

Patrolman Willis got the squad ship competently over to the planet, a diameter out. He juggled to position over the archipelago. Sergeant Madden turned on the space phone. Nothing. He frowned. A grounded ship awaiting help should transmit a beam signal to guide its rescuer. But nothing came up from the ground.

Patrolman Willis looked at him uncertainly. Sergeant Madden rumbled and swung the telescope below.



The surface of the planet appeared —deep water, practically black beneath a surface reflection of daytime sky. The image shifted—a patch of barren rocks. The sergeant glanced at the survey picture, shifted the telescope, and found the northernmost island. He swelled the picture. He could see the white of monstrous surf breaking on the windward shore —waves that had gathered height going all around the planet. He traced the shoreline. There was a bay up at the top.

He centered the shoreline of the bay and put on maximum magnification. Then he pointed a stubby forefinger. A singular, perfectly straight streak of black appeared, beginning a little distance inland from the bay and running up into what appeared to be higher ground. The streak ended not far from a serpentine arm of the sea which almost cut the island in half.

"That'll be it," said Sergeant Madden, rumbling. "The *Cerberns* had to land on her rockets. She had some ground speed. She burned a ten-mile streak on the ground, coming down." He growled. "Commercial skippers! 'Should've matched velocity aloft! Take her down."

The squad ship drove for ground.

Patrolman Willis steadied the ship no more than a few thousand feet high, above the streak of scorched ground and ashes.

"It was heading inland, all right," rumbled Sergeant Madden. "Lucky! If it'd been heading the other way, it could've gone out and landed in

the sea. That would ha' been a mess! But where is it?"

The squad'ship descended farther. It followed the lane of carbonized soil. That marking narrowed—the *Cerberus* had plainly been descending. Then the streak came to an end. It pinched out to nothing. The *Cerberus* should have been at its end.

It wasn't. There was no ship down on Procyron III.

The matter ceased to be routine. If the liner's drive conked out where Procyron III was the nearest refuge planet, it should have landed here at least six days ago. Some ship had landed here recently.

"Set down," grunted Sergeant Madden.

Patrolman Willis obeyed. The squad ship came to rest in a minor valley, a few hundred yards from the end of the rocket-blast trail. Sergeant Madden got out. Patrolman Willis followed him. This was a duly surveyed and recommended refuge planet. There was no need to check the air or take precautions against inimical animal or vegetable life. The planet was safe.

They clambered over small rocky obstacles until they came to the end of the scorched line. They surveyed the state of things in silence.

A ship had landed here recently. Its blue-white rocket flames had melted gulleys in the soil, turned it to slag, and then flung silky, gossamer threads of slag-wool over the rocks nearby.

At the end of the melted-away hollows, twin slag-lined holes went down deep into the ground. They were take-off holes. Rockets had burned them deeply as they gathered force to lift the ship away again.

Sergeant Madden scrambled to the edge of the nearest blast-well. He put his hand on the now-solidified, glassy slag. It wasn't warm, but it wasn't cold. The glass-lined hole a rocket leaves takes a long time to cool down.

"She landed here, all right," he grunted. "But she took off again before the torp arrived to tell us about it."

Willis protested:

"But, sergeant! She only had one set of rockets! She couldn't have taken off again! She didn't have the rockets to do it with!"

"I know she couldn't," growled the sergeant. "But she did."

The *Cerberus,* once landed, should have waited here. It was not only a police regulation; it was common sense. When a ship broke down in space, the exclusive hope for that ship's company lay in a refuge planet for ships in that traffic lane. Even lifeboats could ordinarily reach some refuge planet, for picking up later. They couldn't possibly be located otherwise. With three dimensions in which to be missed, and light-years of distance in which to miss them—no ship or boat had ever been found as much as a light-week out in space. No ship with a crippled drive could possibly be helped unless it got to a specified refuge world where it could be found. No

ship which had reached a refuge planet could conceivably want to leave it.

There was also the fact that no ship which had made such a landing would have extra rockets with which to take off for departure.

The *Cerberus* had landed. Timmy's girl was on it. It had taken off again. It was either an impossible mass suicide or something worse. It certainly wasn't routine.

Patrolman Willis asked hesitantly:

"D'you think, sergeant, it could be Huks sneaked back—?"

Sergeant Madden did not answer. He went back to the squad ship and armed himself. Patrolman Willis followed suit. The sergeant boobied the squad ship so no unauthorized person could make use of it, and so it would disable itself if anyone with expert knowledge tried. Therefore, nobody with expert knowledge would try.

The two cops began a painstaking quest for police-type evidence to tell them what had happened, and how and why the *Cerberus* was missing, after a clumsy but safe landing on Procyron III and when all sanity demanded that it stay there, and when it was starkly impossible for it to leave.

Sergeant Madden and Patrolman Willis were, self-evidently, the only human beings on a planet some nine thousand miles in diameter. It was easy to compute that the nearest other humans would be at least some thousands of thousands of millions of miles away—so far away that distance had no meaning. This planet was something over nine-tenth rolling sea, but there were a few tens of thousands of square miles of solid ground in the one archipelago that broke the ocean's surface. It was such loneliness as very few people ever experience. But they did not notice it. They were busy.

They went over the ground immediately about the landing place. Rocket flame had splashed it, both at the *Cerberus'* landing and at the impossible take-off. There was nothing within a hundred yards not burned to a crisp. They searched outside that area. Sergeant Madden rumbled to his companion:

"Where'd the other ship land?"

Patrolman Willis blinked at him.

"There had to be another ship!" said Sergeant Madden irritably. "To bring the extra rockets. The other ship had to've brought 'em. And it had to have rockets of its own. There's no spaceport here!"

Patrolman Willis blinked again. Then he saw. The *Cerberus* carried one set of emergency-landing rockets, for use in a descent on a refuge planet if the need arose. The need had arisen and the *Cerberus* had used them. Then, from somewhere, another set of rockets had been produced for it to use in leaving. Those other rockets must have come on another ship. But it was a trifle more complicated than that. The *Cerberus* had carried one set of rockets and used them. One. It had been supplied with another set from some-

where. Two. They must have been brought by a ship which also used a set of rockets to land by. That made three. Then the other ship must have had a fourth set for its own take-off, or it would be grounded forever on Procyron III.

Patrolman Willis frowned.

"We looked pretty carefully from aloft," he said uncomfortably. "If there'd been another burned-off landing place, we'd have seen it."

"I know," rumbled Sergeant Madden. "And we didn't. But there must've been another ship aground when the *Cerberus* came in. Where was it? It prob'ly knew the *Cerberus* was landing to wait for help. How? If somebody was coming to help the *Cerberus* it would be bound to spot the other ship, and it didn't want to be spotted. Why? Anyhow, it must've taken the *Cerberus* and sent it off, and then taken off itself, leaving nothing sensible for us to think. 'Sounds like delinks." Then he growled. "Only it's not. There'd have to be too many men. Delinks don't work together more'n two or three. Too jealous of showin' off. But where was that other ship, and what was it doin' here?"

Patrolman Willis hesitated, and then said:

"There used to be pirates, sergeant."

"Uh-huh," said the sergeant. "You had it right the first time, most likely. Not delinks. Not pirates. You said Huks." He looked around, estimatingly. "The rockets had to be brought here from somewhere else where they'd been landed. I'm betting the tracks were covered pretty careful. But rockets are heavy. Manhandlin' them, whoever was doin' it would take the easiest way. Hm-m-m. There's water close by over yonder. Sort of a sound in there—too narrow to be a bay. Let's have a look. And the slopes are easiest that way, too."

He led off to the eastward. He thought of Timmy's girl. He'd never seen her, but Timmy was going to marry her. She was on the *Cerberus*. It was the job of the cops to take care of whatever dilemma that ship might be in. As of here and now, it was Sergeant Madden's job. But besides that, he thought of the way Timmy would feel if anything happened to the girl he meant to marry. As Timmy's father, the sergeant had to do something. He wanted to do it fast. But it had to be done the right way.

The route he chose was rocky, but it was nearly the only practicable route away from the burned-dead landing place. He climbed toward what on this planet was the east. There were pinnacles and small precipices. There were small, fleshy-leaved bushes growing out of such tiny collections of soil as had formed in cracks and crevices in the rock.

Sergeant Madden noted that one such bush was wilted. He stopped. He bent over and carefully felt of the stones about it. A small rock came out. The bush had been out of

the ground before. It had carefully been replaced. By someone.

"The rockets came this way," said the sergeant, with finality. "Hauled over this pass to the *Cerberus*. Somebody must've knocked this bush loose while workin' at getting 'em along. So he replanted it. Only not good enough. It wilted."

"Who did it?" demanded Patrolman Willis.

"Who we want to know about," growled Sergeant Madden. "Maybe Huks. Come on!"

He scrambled ahead. He wheezed as he climbed and descended. After half a mile, Patrolman Willis said abruptly:

"You figure they all left, before anybody tried to find 'em?"

The sergeant grunted affirmatively. A quarter mile still farther, the rocky ground fell away. There was the gleam of water below them. Rocky cliffs enclosed an arm of the sea that came deep into the land, here. In the cliffs rock-strata tilted insanely. There were red and yellow and black layers—mostly yellow and black. They showed in startlingly clear contrast.

"Right!" said Sergeant Madden in morose satisfaction. "I thought there might've been a boat. But this's it!"

He went down a steep descent to the very edge of the sound—it was even more like a fjord—where the waters of the ocean came in among the island's hills. On the far side, a little cascade leaped and bubbled down to join the sea.

"You go that way," commanded Sergeant Madden, "and I'll go this. We've got two things to look for—a shallow place in the water coming right up to shore. And look for signs of traffic from the cliffs to the water. By the color of those rocks, we'd ought to find both."

He lumbered away along the water's edge. There were no creatures which sang or chirped. The only sounds were wind and the lapping of waves against the shore. It was very, very lonely.

Half a mile from the point of his first descent, the sergeant found a shoal. It was a flat space of shallow water—discoverable by the color of the bottom. The water was not over four feet deep. It was a remarkably level shoal place.

He whistled on his fingers. When Patrolman Willis reached him, he pointed to the cliffs directly across the beach from the shallow water. Lurid yellow tints stained the cliff walls. Odd masses of fallen stone dotted the cliff foot. At one place they were piled high. That pile looked quite natural—except that it was at the very center of the shore line next the shoal.

"This rock's yellow," said Sergeant Madden, rumbling a little. "It's mineral. If we had a Geiger, it'd be raising hell, here. There's a mine in there. Uranium. If a ship came down on rockets, an' landed in that shoal place yonder . . . why . . . it wouldn't leave a burned spot comin' down or takin' off, either. Y'see?"

Patrolman Willis said: "Look here, sergeant—"

"I'm in command here," growled Sergeant Madden. "Huks didn't booby trap. Proud as hell, and touchy as all get-out, but not killers. Not crazy killers, anyhow. You go get up yonder. Up where we started down. Then go on away. Back to the squad ship. If I don't come along, anyhow you'll know what's what when the *Aldeb* comes."

Patrolman Willis expostulated. Sergeant Madden was firm. In the end, Patrolman Willis went away. And Sergeant Madden sat at ease and rested until he had time enough to get back to the squad ship. It was true that the Huks didn't booby trap. They hadn't had the practice, anyhow, eighty years ago. But this was a very important matter. Maybe they considered it so important that they'd changed their policy concerning this.

Wheezing a little, Sergeant Madden pulled away large stones and small ones. An opening appeared behind them. He grunted and continued his labor. Nothing happened. The mouth of a mine shaft appeared, going horizontally into the cliff.

Puffing from his exertions, Sergeant Madden went in. It was necessary if he were to make a routine examination.

The *Aldeb* came in a full day later. It descended, following the space beacon the squad ship sent up from its resting place. The *Aldeb* was not an impressive sight, of course. It was a medium-sized police salvage ship. It had a crew of fifteen, and it was powerfully engined, and it contained a respectable amount of engineering experience and ability, plus some spare parts and, much more important, the tools with which to make others. It came down in a highly matter-of-fact fashion, and Sergeant Madden and Patrolman Willis went over to it to explain the situation.

"The *Cerberus* came in on rockets," rumbled the sergeant, in the salvage ship's skipper's cabin. "She landed. We found signs that some of her people came out an' strolled around lookin' for souvenirs and such. I make a guess that there was a minin' man among them, but it's only a guess. Anyhow somebody went over to where there's some parti-colored cliffs, where the sea comes away inland. And when they got to that place . . . why . . . there was a ship there. Then."

He paused, frowning.

"It would've been standing on an artificial shoal place, about thirty yards from a shaft that was the mouth of a mine. Uranium. And there's been a lot of uranium taken outta there! It was hauled right outta the mine shaft across the beach to the ship that was waitin'. And there's fresh work in that mine, but not a tool or a scrap of paper to tell who was workin' it. It must've been cleaned up like that every time a ship left after loadin' up. Humans wouldn't've done it. They wouldn't

care. Huks would. There's not supposed to be any of them left in these parts, but I'm guessing the mine was dug by Huks, and the *Cerberus* was taken away by them because the humans on the *Cerberus* found out there was Huks around."

Patrolman Willis said: "The sergeant took a chance on the mine being booby-trapped and went in, after sending me out of range."

The sergeant scowled at him and went on.

"How it happened don't matter. Maybe somebody spotted the ship from the *Cerberus* as it was comin' down. Maybe anything. But whoever run the mine found out somebody knew they were there, so they rushed the *Cerberus*—there prob'ly wasn't even a stun-pistol on board to fight with—and they put new rockets on her."

The skipper of the salvage ship *Aldeb* nodded wisely.

"A ship comin' to load up minerals where there wasn't any spaceport," he observed, "would have a set of rockets to land on, empty, and a double set to take off on, loaded. Yeah."

"They must've figured," said Sergeant Madden, "that we just couldn't make any sense out of what we found. And if we hadn't turned up that mine, maybe never would. But anyhow they sent the *Cerberus* off and covered everything up and went off to stay, themselves, until we gave up and went home."

"I wonder," said the skipper of the *Aldeb*, "where they took the *Cerberus?* That's my job!"

"Not far," grunted Sergeant Madden. "They had to be taking the *Cerberus* somewhere. If they just wanted to wipe it out, after they rushed it, they coulda just set off its fuel like it'd happened in a bad landing. And that landing was bad! If there'd been a fuel-explosion crater at the end of that burnt line on the ground, nobody'd ever've looked further. But there wasn't. So there's a place they're takin' the *Cerberus* to. But it's got a brokedown drive. It can only hobble along. They can't try to get but so far! What's the nearest sol-type star?"

The *Aldeb*'s skipper pushed a button and the Precinct Atlas came out of its slot. The skipper punched keys and the atlas clicked and whirred. Then its screen lighted. It showed a report on a solar system that had been fully surveyed.

"Uh-uh," grunted the sergeant. "A survey woulda showed up if a planet was Huk-occupied. What's next nearest?"

Again the atlas whirred and clicked. A single line of type appeared. It said, *"Sirene, 1432. Unsurveyed."* The galactic co-ordinates followed. That was all.

"This looks likely!" said the sergeant. "Unsurveyed, and off the ship lanes. It ain't between any place and any other. It could go a thousand years and never be landed on. It's got planets."

It was highly logical. According

to Krishnamurti's Law, any sol-type sun was bound to have planets of such-and-such relative sizes in orbits of such-and-such relative distances.

"Willis and me," said the sergeant, "we'll go over and see if there's Huks there and if they've got the *Cerberus*. You better get this stuff on a message-torp ready to send off if you have to. Are you going to come over to this—Sirene 1432?"

The skipper of the *Aldeb* shrugged.

"Might as well. Why go home and have to come back again? There could be a lot of Huks there."

"Yeah," admitted Sergeant Madden. "I'd guess a whole planet full of 'em that laid low when the rest were scrapping with the Force. The others lost and went clean across the galaxy. These characters stayed close. I'm guessing. But they hid their mine, here. They could've been stewing in their own juice these past eighty years, getting set to put up a hell of a scrap when somebody found 'em. We'll be the ones to do it."

He stood up and shook himself.

"It's not far," he repeated. "Our boat's just fast enough we ought to get there a couple of days after the *Cerberus* sets down. You'd ought to be five-six hours behind us." He considered. " 'Meet you north pole farthest planet out this side of the sun. Right?"

"I'll look for you there," said the skipper of the *Aldeb*.

Sergeant Madden and Patrolman Willis went out of the salvage ship and trudged to the squad ship. They climbed in.

"You got the co-ordinates?" asked the sergeant.

"I copied them off the atlas," said Willis.

Sergeant Madden settled himself comfortably.

"We'll go over," he grumbled, "and see what makes these Huks tick. They raised a lot of hell, eighty years ago. It took all the off-duty men from six precincts to handle the last riot. The Huks had got together and built themselves a fightin' fleet then, though. It's not likely there's more than one planetful of them where we're going. I thought they'd all been moved out."

He shook his head vexedly.

"No need for 'em to have to go, except they wouldn't play along with humans. Acted like delinks, they did. Only proud. Y'don't get mad fighting 'em. So I heard, anyway. If they only had sense you could get along with them."

He dogged the door shut. Patrolman Willis pushed a button. The squad ship fell toward the sky.

Very matter-of-factly.

On the way over, in overdrive, Sergeant Madden again dozed a great deal of the time. Sergeants do not fraternize extensively with mere patrolmen, even on assignments. Especially not very senior sergeants only two years from retirement. Patrolman Willis met with the sergeant's approval, to be sure. Timmy was undoubtedly more competent as

a cop, but Timmy would have been in a highly emotional state with his girl on the *Cerberus* and that ship in the hands of the Huks.

Between naps, the sergeant somnolently went over what he knew about the alien race. He'd heard that their thumbs were on the outside of their hands. Intelligent nonhumans would have to have hands, and with some equivalent of opposable thumbs, if their intelligence was to be of any use to them. They pretty well had to be bipeds, too, and if they weren't warm-blooded they couldn't have the oxygen-supply that highgrade brain cells require.

There were even certain necessary psychological facts. They had to be capable of learning and of passing on what they'd learned, or they'd never have gotten past an instinctual social system. To pass on acquired knowledge, they had to have family units in which teaching was done to the young—at least at the beginning. Schools might have been invented later. Most of all, their minds had to work logically to cope with a logically constructed universe. In fact, they had to be very much like humans, in almost all significant respects, in order to build up a civilization and develop sciences and splendidly to invade space just a few centuries before humans found them.

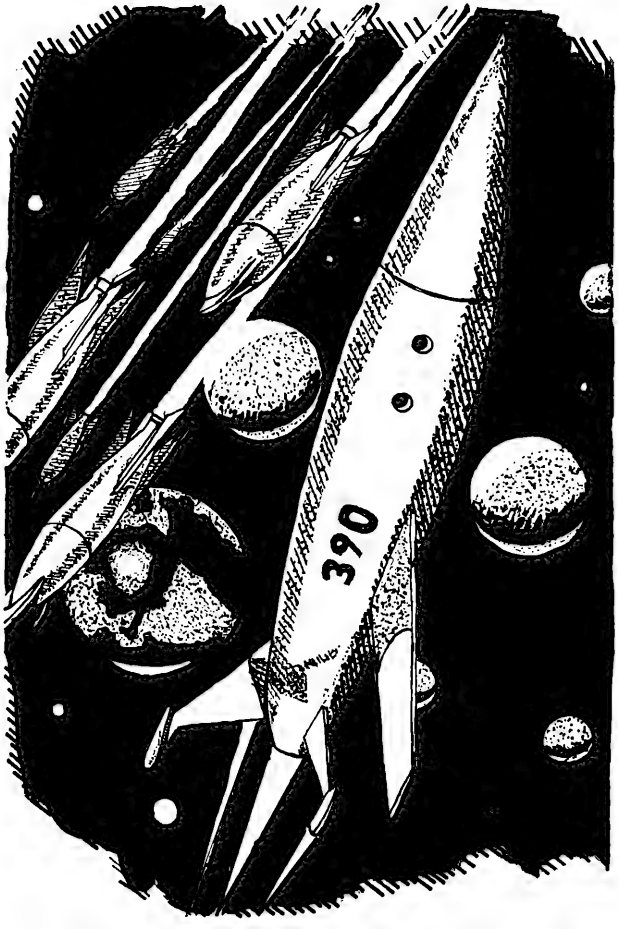
But, said Sergeant Madden to himself, *I bet they've still got armies and navies!*

Patrolman Willis looked at him inquiringly, but the sergeant scowled at his own thoughts. Yet the idea was very likely. When Huks first encountered humans, they bristled with suspicion. They were definitely on the defensive when they learned that humans had been in space longer —much longer—than they had, and already occupied planets in almost fifteen per cent of the galaxy.

Sergeant Madden found his mind obscurely switching to the matter of delinks—those characters who act like adolescents, not only while they are kids, but after. They were the permanent major annoyance of the cops, because what they did didn't make sense. Learned books explained why people went delink, of course. Mostly it was that they were madly ambitious to be significant, to matter in some fashion, and didn't have the ability to matter in the only ways they could understand. They wanted to drive themselves to eminence, and frantically snatched at chances to make themselves nuisances because they couldn't wait to be important any other way.

Sergeant Madden blinked slowly to himself. When humans first took to space a lot of them were after glamour, which is the seeming of importance. His son Timmy was on the cops because he thought it glamorous. Patrolman Willis was probably the same way. Glamour is the offer of importance. An offer of importance is glamour.

The sergeant grunted to himself. A possible course of action came into his mind. He and Patrolman Willis were on the way to the solar system Sirene 1432, where Krishnamurti's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Law said there ought to be something very close to a terran-type planet in either the third or fourth orbit out from the sun. That planet would be inhabited by Huks, who were very much like humans. They knew of the defeat and forced emigration of their fellow-Huks in other solar systems. They'd hidden from humans—and it must have outraged their pride. So they must be ready to put up a desperate and fanatical fight if they were ever discovered.

A squad ship with two cops in it, and a dumpy salvage ship with fifteen more, did not make an impressive force to try to deal with a planetary population which bitterly hated humans. But the cops did not plan conquest. They were neither a fighting rescue expedition nor a punitive one. They were simply cops on assignment to get the semi-freighter *Cerberus* back in shape to travel on her lawful occasions among the stars, and to see that she and her passengers and crew got to the destination for which they'd started. The cop's purpose was essentially routine. And the Huks couldn't possibly imagine it.

Sergeant Madden settled some things in his mind and dozed off again.

When the squad ship came out of overdrive and he was awakened by the unpleasantness of breakout, he yawned. He looked on without comment as Patrolman Willis matter-of-factly performed the tricky task of determining the ecliptic while a solar system's sun was little more than a first-magnitude star. It was wholly improbable that anything like Huk patrol ships would be out so far. It was even more improbable that any kind of detection devices would be in operation. Any approaching ship could travel several times as fast as any signal.

Patrolman Willis searched painstakingly. He found a planet which was a mere frozen lump of matter in vastness. It was white from a layer of frozen gases piled upon its more solid core. He made observations.

"I can find it again, sir, to meet the *Aldeb*. Orders, sir?"

"Orders?" demanded Sergeant Madden. "What? Oh. Head in toward the sun. The Huks'll be on Planet Three or Four, most likely. And that's where they'll have the *Cerberus*."

The squad ship continued sunward while Patrolman Willis continued his observations. A star-picture along the ecliptic. An hour's run on interplanetary drive—no overdrive field in use. Another picture. The two prints had only to be compared with a blinker for planets to stick out like sore thumbs, as contrasted with stars that showed no parallax. Sirene I—the innermost planet—was plainly close to a transit. II was away on the far side of its orbit. III was also on the far side. IV was in quadrature. There was the usual gap where V should have been. VI—it didn't matter. They'd passed VIII a little while since, a ball of stone with a frigid gas-ice covering.

Patrolman Willis worked painstakingly with amplifiers on what oddments could be picked up in space.

"It's Four, sir," he reported unnecessarily, because the sergeant had watched as he worked. "They've got detectors out. I could just barely pick up the pulses. But by the time they've been reflected back they'll be away below thermal noise-volume. I don't think even multiples could pick 'em out. I'm saying, sir, that I don't think they can detect us at this distance."

Sergeant Madden grunted.

"D'you think we came this far not to be noticed?" he asked. But he was not peevish. Rather, he seemed more thoroughly awake than he'd been since the squad ship left the Precinct substation back on Varenga IV. He rubbed his hands a little and stood up. "Hold it a minute, Willis."

He went back to the auxiliary-equipment locker. He returned to his seat beside Patrolman Willis. He opened the breech of the ejector-tube beside his chair.

"You've had street-fighting training," he said almost affably, "at the Police Academy. And siege-of-criminals courses too, eh?" He did not wait for an answer. "It's historic," he observed, "that since time began cops've been stickin' out hats for crooks to shoot at, and that crooks've been shooting, thinking there were heads in 'em."

He put a small object in the ejector tube, poked it to proper seating, and settled himself comfortably, again.

"Can you make it to about a quarter-million miles of Four," he asked cheerfully, "in one hop?"

Patrolman Willis set up the hop-timer. Sergeant Madden was pleased that he aimed the squad ship not exactly at the minute disk which was Planet IV of this system. It was prudence against the possibility of an error in the reading of distance.

"Ever use a marker, Willis?"

Patrolman Willis said: "No, sir."

Before he'd finished saying it the squad ship had hopped into overdrive and out again.

Sergeant Madden approved of the job. His son Timmy couldn't have done better. Here was Planet IV before them, a little off to one side, as was proper. They had run no risk of hitting in overdrive.

The distance was just about a quarter-million miles, if Krishnamurti's Law predicting the size and distance of planets in a sol-type system was reliable. The world was green and had icecaps. There should always be, in a system of this kind, at least one oxygen-planet with a nearly-terran-normal range of temperature. That usually meant green plants and an ocean or two. There wasn't quite as much sea as usual, on this planet, and therefore there were some extensive yellow areas that must be desert. But it was a good, habitable world. Anybody whose home it was would defend it fiercely.

"Hm-m-m," said Sergeant Madden. He took the ejector-tube lanyard in his hand. He computed

mentally. About a quarter-million miles, say. A second and a half to alarm, down below. Five seconds more to verification. Another five to believe it. Not less than twenty altogether to report and get authority to fire. The Huks were a fighting race and presumably organized, so they'd have a chain of command and decisions would be made at the top. Army stuff, or navy. Not like the cops, where everybody knew both the immediate and final purposes of any operation in progress, and could act without waiting for orders.

It should be not less than thirty seconds before a firing key made contact down below. As a matter of history, years ago the Huks had used eighty-gravity rockets with tracking-heads and bust-bombs on them. These Huks would hardly be behind the others in equipment. And back then, too, Huks kept their rocket missiles out in orbit where they could flare into eighty-gee acceleration without wasting time getting out to where an enemy was. In their struggle against the cops two generations ago the Huks had had to learn that fighting wasn't all drama and heroics. The cops had taken the glamour out when they won. So the Huks wouldn't waste time making fine gestures now. The squad ship had appeared off their planet. It had not transmitted a code identification-signal the instant it came out of overdrive. The Huks were hiding from the cops, so they'd shoot.

"Hop on past," commanded Sergeant Madden, "the instant I jerk the ejector lanyard. Don't fool around. Over the pole will do."

Patrolman Willis set the hop-timer. Twenty seconds. Twenty-two. Three. Four.

"Hop!" said Sergeant Madden. As he spoke, he jerked the lanyard.

Before the syllable was finished, Patrolman Willis pressed hard on the overdrive button. There came the always-nauseating sensation of going into overdrive combined with the even more unpleasant sensation of coming out of it. The squad ship was somewhere else.

A vast, curving whiteness hung catercornered in the sky. It was the planet's icecap, upside down. Patrolman Willis had possibly cut it a trifle too fine.

"Right," said the sergeant comfortably. "Now swing about to go back and meet the *Aldeb*. But wait."

The stars and the monstrous white bowl reeled in their positions as the ship turned. Sergeant Madden felt that he could spare seconds, here. He ignored the polar regions of Sirene IV, hanging upside down to rearward from the squad ship. Even a planetary alarm wouldn't get polar-area observers set to fire in much less than forty seconds, and there'd have to be some lag in response to instrument reports. It wouldn't be as if trouble had been anticipated at just this time.

The squad ship steadied. Sergeant Madden looked with pleasurable anticipation back to where the ship had come out of overdrive and lingered for twenty-four seconds. Willis had

moved the squad ship from that position, but the sergeant had left a substitute. The small object he'd dropped from the ejector tube now swelled and writhed and struggled. In pure emptiness, a shape of metal foil inflated itself. It was surprisingly large—almost the size of the squad ship. But in emptiness the fraction of a cubic inch of normal-pressure gas would inflate a foil bag against no resistance at all. This flimsy shape even jerked into motion. Released gas poured out its back. There was no resistance to acceleration save mass, which was negligible.

A sudden swirling cloud of vapor appeared where the squad ship's substitute went mindlessly on its way. The vapor rushed toward the space-marker.

A star appeared. It was a strictly temporary star, but even from a quarter-million-mile distance it was incredibly bright. It was a bomb, blasting a metal-foil flimsy which the electronic brain of a missile-rocket could only perceive as an unidentified and hence enemy object. Bomb and rocket and flimsy metal foil turned together to radioactive metal vapor.

Sergeant Madden knew professional admiration.

"Thirty-four seconds!" he said approvingly.

The Huks could not have expected the appearance of an enemy just here and now. It was the first such appearance in all the planet's history. They certainly looked for no consequences of the seizure of the *Cerberus,* carefully managed as that had been. So to detonate a bomb against an unexpected inimical object within thirty-four seconds after its appearance was very good work indeed.

"Hm-m-m," said Sergeant Madden, "we've nothing more to do right now, Willis. We'll go back to that hunk of ice you spotted comin' in, and wait for the *Aldeb.*"

Patrolman Willis obediently set the hop-timer and swung the squad ship to a proper aiming. He pressed the overdrive button.

His manner, like that of Sergeant Madden, was the manner of someone conducting a perfectly routine operation.

"If my son Timmy were with me on this job," said Sergeant Madden, "I'd point out the inner meaning of the way we're going about handling it."

He reposed in his bucket-seat in the squad ship, which at that moment lay aground not quite right-side-up close to the north pole of Sirene VIII. The local sun was not in view. The squad ship's ports opened upon the incredible brilliance of the galaxy as seen out of atmosphere. There was no atmosphere here. It was all frozen. But there was a horizon, and the light of the stars showed the miniature jungle of gas crystals. Frozen gases—frozen to gas-ice—they were feathery. They were lacy. They were infinitely delicate. They were frost in three dimensions.

"Yes, sir," said Patrolman Willis.

"The *Aldeb*'s due soon," said Sergeant Madden, "so I'll make it short. The whole thing is that we are cops, and the Huks are soldiers. Which means that they're after feeling important—after glamour. Every one of 'em figures it's necessary to be important. He craves it."

Patrolman Willis listened. He had a proximity detector out, which would pick up any radiation caused by the cutting of magnetic lines of force by any object. It made very tiny whining noises from time to time. If anything from a Huk missile rocket to the salvage ship *Aldeb* approached, however, the sound would be distinctive.

"Now that," said Sergeant Madden, "is the same thing that makes delinks. A delink tries to matter in the world he lives in. It's a small world, with only him and his close pals in it. So he struts before his pals. He don't realize that anybody but him and his pals are human. See?"

"I know!" said Patrolman Willis with an edge to his voice. "Last month a couple of delinks set a ground-truck running downhill, and jumped off it, and—"

"True," said Sergeant Madden. He rumbled for a moment. "A soldier lives in a bigger world he tries to matter in. He's protectin' that world and being admired for it. In old, old days his world was maybe a day's march across. Later it got to be continents. They tried to make it planets, but it didn't work. But there've got to be enemies to protect a world against, or a soldier isn't important. He's got no glamour. Y'see?"

"Yes, sir," said Willis.

"Then there's us cops," said Sergeant Madden wryly. "Mostly we join up for the glamour. We think it's important to be a cop. But presently we find we ain't admired. Then there's no more glamour—but we're still important. A cop matters because he protects people against other people that want to do things to 'em. Against characters that want to get important by hurtin' 'em. Being a cop means you matter against all the delinks and crooks an' fools and murderers who'd pull down civilization in a minute if they could, just so they could be important because they did it. But there's no glamour! We're not admired! We just do our job. And if I sound sentimental, I mean it."

"Yes, sir," said Willis.

"There's a big picture in the big hall in Police Headquarters on Valdez III," said the sergeant. "It's the story of the cops from the early days when they wore helmets, and the days when they rode bicycles, and when they drove ground-cars. There's not only cops, but civilians, in every one of the panels, Willis. And if you look careful, you'll see that there's one civilian in every panel that's thumbin' his nose at a cop."

"I've noticed," said Willis.

"Remember it," said Sergeant Madden. "It bears on what we've got to do to handle these Huks. Sol-

diers couldn't do what we've got to. They'd fight, to be admired. We can't. It'd spoil our job. We've got to persuade 'em to behave themselves."

Then he frowned, as if he were dissatisfied with what he'd said. He shook his head and made an impatient gesture.

"No good," he said vexedly. "You can't say it. Hm-m-m . . . I'll nap a while until the *Aldeb* gets here."

He settled back to doze.

Patrolman Willis regarded him with an odd expression. They were aground on Sirene VIII, on which no human ship had ever landed before them, and they had stirred up a hornet's nest on Sirene IV, which had orbital eighty-gee rocket missiles in orbit around it with bust bomb heads and all the other advantages of civilization. The *Aldeb* was on the way with a fifteen-man crew. And seventeen men, altogether, must pit themselves against an embattled planet with all its population ready and perhaps eager for war. Their errand was to secure the release of human prisoners and the surrender of a seized spaceship from a proud and desperate race.

It did not look promising. Sergeant Madden did not look like the kind of genius who could carry it through. Dozing, with his chin tilted forward on his chest, he looked hopelessly commonplace.

The skipper of the *Aldeb* came over to the squad ship, because Sergeant Madden loathed spacesuits and there was no air on Sirene VIII. Patrolman Willis watched as the skipper came wading through the lacy, breast-high gas-frost. It seemed a pity for such infinitely delicate and beautiful objects to be broken and crushed.

The sergeant unlocked the lock-door and spoke into a microphone when he heard the skipper stamping on the steel lock-flooring.

"Brush yourself off," commanded the sergeant, "and sweep the stuff outside. Part of its methane and there's some ammonia in those crystals."

There was a suitable pause. The outer door closed. The lock filled with air, and gas-crystal fragments turned to reeking vapor as they warmed. The skipper bled them out and refilled the lock. Then he came inside. He opened his face plate.

"Well?"

"There's Huks here," Sergeant Madden told him, "their hair in a braid and all set to go. They popped off a marker I stuck out for them to shoot at in thirty-four seconds by the clock. Bright boys, these Huks! They don't wait to ask questions. When they see something, they shoot at it."

The skipper tilted back his helmet and said beseechingly:

"Scratch my head, will you?"

When Patrolman Willis reached out his hand, the skipper revolved his head under it until the itchy place was scratched. Most men itch instantly they are unable to scratch. The skipper's space gloves were sprouting whiskers of moisture-frost now.

"Thanks," he said gratefully. "What are you going to do, sergeant?"

"Open communication with 'em," said the sergeant, heavily.

The skipper waited. Opening communication with someone who shoots on detector-contact may be difficult.

"I figure," rumbled the sergeant, "they're a lot like delinks. A cop can figure how they think, but they can't figure how a cop thinks."

"Such as?" asked the skipper.

"They can't understand anybody not tryin' to be important," said Sergeant Madden. "It baffles 'em."

"What's that got to do with the people on the *Cerberus?*" demanded the skipper. "It's our job to get them and the *Cerberus* back on the way to port!"

"I know!" conceded Sergeant Madden, "and the girl my son Timmy's going to marry is one of them. But I don't think we'll have much trouble. Have you got any multipoly plastic on the *Aldeb?*"

The skipper nodded, blankly. Multipoly plastic is a substance as anomalous as its name. It is a multiple polymer of something-or-other which stretches very accommodatingly to a surprising expanse, and then suddenly stops stretching. When it stops, it has a high and obstinate tensile strength. All ships carry it for temporary repairs, because it will seal off anything. A one-mill thickness will hold fifteen pounds pressure. Ships have been known to come down for landing with bubbles of multipoly glistening out of holes in their hulls. A salvage ship, especially, would carry an ample supply. A minor convenience in its use is the fact that a detonator-cap set off at any part of it starts a wave of disintegration which is too slow to be an explosion and cleans up the mess made in its application.

"Naturally I've got it," said the skipper. "What do you want with it?"

Sergeant Madden told him. Painfully. Painstakingly.

"The tough part," said the skipper, "is making 'em go out an ejector tube. But I've got fourteen good men. Give me two hours for the first batch. We'll make up the second while you're placing them."

Sergeant Madden nodded.

The skipper went into the lock and closed the door behind him. After a moment Patrolman Willis saw him wading through the incredibly delicate and fragile gas-ice crystals. Then the *Aldeb*'s lock swallowed him.

The odd thing about the Huk business was the minute scale of the things that happened, compared to the background in which they took place. The squad ship, for example, lifted off Sirene VIII for the second time. She'd been out once and come back for the second batch of multipoly objects. Sirene VIII was not a giant planet, by any means, but it was a respectable six thousand miles in diameter. The squad ship's sixty feet of length was a mote so minute

by comparison that no comparison was possible.

She headed in toward the sun. She winked out of existence into overdrive. She headed toward Sirene IV, in quadrature, where missile rockets floated in orbit awaiting the coming of any enemy. The distance to be traveled was roughly one and a half light-hours—some twelve astronomical units of ninety-three million miles each.

The squad ship covered that distance in a negligible length of time. It popped into normality about two hundred thousand miles out from the Huk home-world. It seemed insolently to remain there. In a matter of seconds it appeared at another place—a hundred fifty thousand miles out, but off to one side. It seemed arrogantly to remain there, too—in a second place at the same time. Then it appeared, with the arbitrary effect a ship does give when coming out of overdrive, at a third place a hundred seventy-five thousand miles from the planet. At a fourth place barely eighty thousand miles short of collision with the Huk world. At a fifth place. A sixth. Each time it appeared, it seemed to remain in plain, challenging, insolent view, without ceasing to exist at the spots where it had appeared previously. In much less than a minute, the seeming of a sizable squadron of small human ships had popped out of emptiness and lay off the Huk home world at distances ranging from eighty thousand miles to three times as much.

Suddenly, light flashed intolerably in emptiness. It was in contact with one of the seeming squad ships, which ceased to be. But immediately two more ships appeared at widely different spots. A second flash—giant and terrible nearby—a pin point of light among the stars. Another ostensible human ship vanished in atomic flame—but still another appeared magically from nowhere. A third and then a fourth flash. Three more within successive seconds.

Squad ships continued to appear as if by necromancy, and space near the planet was streaked by flarings of white vapor as eighty-gee rockets hurled themselves to destruction against the invading objects. As each bomb went off, its light was brighter than the sun. But each was a mere flicker in enormousness. They flashed, and flashed— Each was a bomb turning forty kilograms of matter into pure, raw, raging destruction. Each was devastation sufficient to destroy the greatest city the galaxy ever knew.

But in that appalling emptiness they were mere scintillations. In the background of a solar system's vastness they made all the doings of men and Huks alike seem ludicrous.

For a long time—perhaps five minutes, perhaps ten—the flashings which were the most terrible of all weapons continued. Each flash destroyed something which, in scale, was less than a dust mote. But more motes appeared, and more and more and more.

And presently the flashes grew infrequent. The threads of vapor which

led to each grew longer. In a little while they came from halfway around the planet. Then squad ships appeared even there. And immediately pin points of intolerable brilliance destroyed them—yet never as fast as they appeared.

Finally there came ten seconds in which no atomic flame ravened in emptiness. One more glitter. Fifteen seconds. Twenty. Thirty seconds without a flashing of atomic explosive—

The surviving objects which appeared to be squad ships hung in space. They moved without plan. They swam through space without destination. Presently the most unobservant of watches must have perceived that their movement was random. That they were not driven. That they had no purpose. That they were not squad ships but targets—and not even robot targets—set out for the missile rockets of the Huk planet to expend themselves on.

The missile rockets had expended themselves.

So Sergeant Madden opened communication with the Huks.

"These Huks," observed Sergeant Madden as the squad ship descended to the Huk planet's surface, "they must've had a share in the scrapping eighty years ago. They've got everything the old-time Huks had. They've even got recordings of human talk from civilian human prisoners of years gone by. And they kept somebody able to talk it—for when they fought with us!"

Patrolman Willis did not answer. He had a strange expression on his face. At the moment they were already within the Huk home-planet's atmosphere. From time to time a heavily accented voice gave curt instructions. It was a Huk voice, telling Patrolman Willis how to guide the squad ship to ground where—under truce—Sergeant Madden might hold conference with Huk authorities.

"Hold the course," said the voice. *"That is r-right. Do as you are."*

The horizon had ceased to be curved minutes ago. Now the ground rose gradually. The ground was green. Large green growths clustered off to one side of the flat area where the ship was to alight. They were the equivalent of trees on this planet. Undoubtedly there were equivalents of grass and shrubs, and seed-bearing and root-propagating vegetation, and Huks would make use of some seeds and roots for food. Because in order to have a civilization one has to have a larger food-supply than can be provided by even the thriftiest of grazing animals. But the Huks or their ancestors would need to have been flesh-eaters also, for brains to be useful in hunting and therefore for mental activity to be recognized as useful. A vegetarian community can maintain a civilization, but it has to start off on meat.

A clump of ground-cars waited for the squad ship's landing. The ship touched, delicately. Sergeant Madden rumbled and got out of his chair. Patrolman Willis looked at him uneasily.

"Huh!" said Sergeant Madden. "Of course you can come. You want them to think we're bluffing? No. Nothing to fight with. The Huks think our fleet's set to do the fighting."

He undogged the exit door and went out through the small vestibule which was also the ship's air lock. Patrolman Willis joined him out-of-doors. The air was fresh. The sky was blue. Clouds floated in the sky, and growing things gave off a not-unpleasant odor, and a breeze blew uncertainly. But such things happen on appropriate planets in most sol-type solar systems.

Huks came toward them. Stiffly. Defiantly. The most conspicuous difference between Huks and humans was of degree. Huks grew hair all over their heads, instead of only parts of it. But they wore garments, and some of the garments were identical and impressive, so they could be guessed to be uniforms.

"How-do," said the voice that had guided the ship down. "We are r-ready to listen to your message."

Sergeant Madden said heavily:

"We humans believe you Huks have got a good fleet. We believe you've got a good army. We know you've got good rockets and a fighting force that's worth a lot to us. We want to make a treaty for you to take over and defend as much territory as you're able to, against some characters heading this way from the Coalsack region."

Silence. The interpreter translated, and the Huks muttered astonishedly among themselves. The interpreter received instructions.

"Do you mean others of our r-race? he demanded haughtily. "Members of our own r-race who r-return to r-recover their home worlds from humans?"

"Hell, no!" said Sergeant Madden dourly. "If you can get in contact with them and bring them back, they can have their former planets

back and more besides—if they'll defend 'em. We're stretched thin. We didn't come here to fight your fleet. We came to ask it to join us."

More mutterings. The interpreter faced about.

"This surpr-rises us," he said darkly. "We know of no danger in the direction you speak of. Per-rhaps we would wish to make fr-riends with that danger instead of you!"

Sergeant Madden snorted.

"You're welcome!" Then he said sardonically: "If you're able to reach us after you try, the offer stands. Join us, and you'll give your own commands and make your own decisions. We'll co-operate with you. But you won't make friends with the characters I'm talking about! Not hardly!"

More hurried discussions still. The interpreter, defiantly: "And if we r-refuse to join you?"

Sergeant Madden shrugged.

"Nothing. You'll fight on your own, anyhow. So will we. If we joined up we could both fight better. I came to try to arrange so we'd both be stronger. We need you. You need us."

There was a pause. Patrolman Willis swallowed. At five-million-mile intervals, in a circle fifty million miles across with the Huk world as its center, objects floated in space. Patrolman Willis knew about them, because he and Sergeant Madden had put them there immediately after the missile rockets ceased to explode. He knew what they were, and his spine crawled at the thought of what would happen if the Huks found out. But the distant objects were at the limit of certain range for detection devices. The planet's instruments could just barely pick them up. They subtended so small a fraction of a thousandth of a second of arc that no information could be had about them.

But they acted like a monstrous space fleet, ready to pour down warheaded missiles in such numbers as to smother the planet in atomic flame. Patrolman Willis could not imagine admitting that such a supposed fleet needed another fleet to help it. A military man, bluffing as Sergeant Madden bluffed, would not have dared offer any terms less onerous than abject surrender. But Sergeant Madden was a cop. It was not his purpose to make anybody surrender. His job was, ultimately, to make them behave.

The Huks conferred. The conference was lengthy. The interpreter turned to Sergeant Madden and spoke with vast dignity and caginess:

"When do you r-require an answer?"

"We don't," grunted Sergeant Madden. "When you make up your minds, send a ship to Varenga III. We'll give you the information we've got. That's whether you fight with us or independent. You'll fight, once you meet these characters! We don't worry about that! Just . . . we can do better together." Then he said: "Have you got the co-ordinates

for Varenga? I don't know what you call it in your language."

"We have them," said the interpreter, still suspiciously.

"Right!" said Sergeant Madden. "That's all. We came here to tell you this. Let us know when you make up your minds. Now we'll go back."

He turned as if to trudge back to the squad ship. And this, of course, was the moment when the difference between a military and a cop mind was greatest. A military man, with the defenses of the planet smashed —or exhausted—and an apparent overwhelming force behind him, would have tried to get the *Cerberus* and its company turned over to him either by implied or explicit threats. Sergeant Madden did not mention them. But he had made it necessary for the Huks to do something.

They'd been shocked to numbness by the discovery that humans knew of their presence on Sirene IV. They'd been made aghast by the brisk and competent nullification of their eighty-gee rocket defenses. They'd been appalled by the appearance of a space fleet which—if it had been a space fleet—could have blasted the planet to a cinder. And then they were bewildered that the humans asked no submission—not even promises from them.

There was only one conclusion to be drawn. It was that if the humans were willing to be friendly, it would be a good idea to agree. Another idea followed. A grand gesture by Huks would be an even better idea.

"Wait!" said the interpreter. He turned. A momentary further discussion among the Huks. The interpreter turned back.

"There is a ship here," he said uneasily. "It is a human ship. There are humans in it. The ship is disabled."

Sergeant Madden affected surprise.

"Yeah? How come?"

"It ar-rived two days ago," said the interpreter. Then he plunged. "We br-rought it. We have a mine on what you call Pr-rocyron Three. The human ship landed, because it was disabled. It discovered our ship and our mine there. We wished to keep the mine secret. Because the humans had found out our secret, we br-rought them here. And the ship. It is disabled."

"Hm-m-m," said Sergeant Madden. "I'll send a repair-boat down to fix whatever's the matter with it. Of course you won't mind." He turned away, and turned back. "One of the solar systems we'd like you to take over and defend," he observed, "is Procyron. I haven't a list of the others, but when your ship comes over to Varenga it'll be ready. Talk our repair-boat down, will you? We'll appreciate anything you can do to help get the ship back out in space with its passengers, but our repair-boat can manage."

He waved his hand negligently and went back to the squad ship. He got in. Patrolman Willis followed him.

"Take her up," said Sergeant Madden.

The squad ship fell toward the sky. Sergeant Madden said satisfiedly:

"That went off pretty good. From now on it's just routine."

There was a bubble in emptiness. It was a large bubble, as such things go. It was nearly a thousand feet in diameter, and it was made of multipoly plastic which is nearly as anomalous as its name. The bubble contained almost an ounce of helium. It had a three-inch small box at one point on its surface. It floated some twenty-five million miles from the Huk planet, and five million miles from another bubble which was its identical twin. It could reflect detector-pulses. In so doing it impersonated a giant fighting ship.

Something like an hour after the squad ship rose from Sirene IV, a detonator-cap exploded in the three-inch box. It tore the box to atoms and initiated a wave of disintegration in the plastic of the bubble. The helium bubble-content escaped and was lost. The plastic itself turned to gas and disappeared.

The bubble had been capable of exactly two actions. It could reflect detector-pulses. In doing so, it had impersonated a giant fighting ship, member of an irresistible fleet. It could also destroy itself. In so doing, it impersonated a giant fighting ship—one of a fleet—going into overdrive.

In rapid succession, all the bubbles which were members of a nonexistent fighting fleet winked out of existence about Sirene IV. There were a great many of them, and no trace of any remained.

The last was long gone when a small salvage ship descended to the Huk home planet. A heavily accented voice talked it down.

The salvage ship landed amid evidences of cordiality. The Huks were extremely co-operative. They even supplied materials for the repair job on the *Cerberus,* including landing rockets to be used in case of need. But they weren't needed for take-off. The *Cerberus* had been landed at a Huk spaceport, which obligingly lifted it out to space again when its drive had been replaced.

And the squad ship sped through emptiness at a not easily believable multiple of the speed of light. Sergeant Madden dozed, while Patrolman Willis performed such actions as were necessary for the progress of the ship. They were very few. But Patrolman Willis thought feverishly.

After a long time Sergeant Madden waked, and blinked, and looked benignly at Patrolman Willis.

"You'll be back with your wife soon, Willis," he said encouragingly.

"Yes, sir." Then the patrolman said explosively: "Sergeant! There's nothing coming from the Coalsack way! There's nothing for the Huks to fight!"

"True, at the moment," admitted Sergeant Madden, "but something could come. Not likely— But you see, Willis, the Huks have had

armed forces for a long time. They've glamour. They're not ready to cut down and have only cops, like us humans. It wouldn't be reasonable to tell 'em the truth—that there's no need for their fighting men. They'd make a need! So they'll stand guard happily against some kind of monstrosities we'll have Special Cases invent for them. They'll stand guard zestful for years and years! Didn't they do the same against us? But now they're proud that even we humans, that they were scared of, ask them to help us. So presently they'll send some Huks over to go through the Police Academy, and then presently there'll be a sub-precinct station over there, with Huks in charge, and . . . why . . . that'll be that."

"But they want planets—"

Sergeant Madden shrugged.

"There's plenty, Willis. The guess is six thousand million planets fit for humans in this galaxy. And by the time we've used them up, somebody'll have worked out a drive to take us to the next galaxy to start all over. There's no need to worry about that! And for immediate—does it occur to you how many men are going to start getting rich because there's a brand-new planet that's got a lot of things we humans would like to have, and wants to buy a lot of things the Huks haven't got?"

Patrolman Willis subsided. But presently he said:

"Sergeant . . . what'd you have done if they hadn't told you about the *Cerberus?*"

Sergeant Madden snorted.

"It's unthinkable! We waltzed in there, and told them a tale, and showed every sign of walkin' right out again without askin' them a thing. They couldn't even tell us to go to hell, because it looked like we didn't care what they said. It was insupportable, Willis! Characters that make trouble, Willis, do it to feel important. And we'd left them without a thing to tell us that was important enough to mention—unless they told us about the *Cerberus.* We had 'em baffled. They needed to say something, and that was the only thing they could say!"

He yawned.

"The *Aldeb* reports everybody on the *Cerberus* safe and sound, only frightened, and the skipper said Timmy's girl was less scared than most. I'm pleased. Timmy's getting married, and I wouldn't want my grandchildren to have a scary mother!"

He looked at the squad ship's instruments. There was a long way yet to travel.

"A-h-h-h! It's a dull business this, overdrive," he said somnolently. "And it's amazing how much a man can sleep when everything's in hand, and there's nothing ahead but a wedding and a few things like that. Just routine, Willis. Just routine!"

He settled himself more comfortably as the squad ship went on home.

THE END

THE . . . SOUND OF BREAKING GLASS

BY ALGIS BUDRYS

Illustrated by Summers

There's nothing like peace of mind! Nothing! Not even all-out nuclear warfare would be quite as effective.

AYLIGHT glared outside, but the room was full of shadows. It was too big—hollow; empty—cut through the broad building from one side to the other. There had once been double doors at either end, opening on the north- and south-bound parking areas. But Alma Petrie's father had bricked up the doorways and ripped out the snack bar. The room had become an echoing box, with stubs of pipe and ends of bx cable coming out of the floor and back wall. Where the snack bar had been, the defensive nerve center now was.

The pounds of instrumentation were housed in unfinished plywood cabinets that Alma Petrie's father had hammered together. They were dwarfed by the room. They looked like packing cases left overnight by workmen who hadn't yet begun to make the room fit for human occupancy. And in this shadowed, bare chamber with its hard terrazzo floor and enameled steel-tiled walls, a dull bell was clacking out its persistent alarm.

Alma Petrie faced an arced row of television sets. The alarm had activated only one of them. Its closed-circuit camera was one of twelve mounted behind masked loopholes in the roof parapet, and was pointed toward the entrance ramp leading up from the northbound roadway. Through it, Alma Petrie peered out into the harsh day.

The shrubs in the center island, the grass on the embankments along both roadways, the woods above the embankments—all were brown and burnt brittle. There had been a drought for weeks. Tar oozed like oil from expansion joints in the curb along the parking lots and around the shattered pump islands in the service area. Heat shimmered above the animal-scattered bones of men who had tried to use the gasoline pump housings for cover, long ago. Alma Petrie's white-eyed glance passed over them hurriedly. It had been in mortal panic that she had watched the automatic cannon do their butcher's work among the bandits. It was in mortal shame that she remembered how she'd quailed at giving decent burial to their remains.

Alma Petrie wiped the back of a gaunt hand across her forehead and, with the same leaden gesture, let her hand fall on the switch to the alarm circuit. It choked to silence in the middle of a beat, and left the room so still that she could plainly hear

the flat, graveled asphalt roof crackling in the heat above her. There was nothing moving in the television screen.

She stood tense, her narrow skull jutting forward on her thin neck. The muscles quivered in her calves. She jeered at herself in driven malice:

The alarm system had gone wrong at last. Somewhere in the complex of photoelectric eyes, thermal detectors, acoustic pickups, infrared scanners, trip wires and treadles that interlaced the terrain for half a square mile around her, a short circuit was sputtering its lie into the master controls. Some one among the patiently circling radar antennas was tracking a ghost. And, beginning with this, the complex, camouflaged system would progressively decay; rot and dissolution would creep with electric stealth through the miles of wiring, destroying, paralyzing as they came, and in the end would leave her naked to the world.

She put her knuckles to her mouth and ground the dry skin between her teeth. She answered herself with fanatic insistence:

Her *father* had designed and installed that alarm system. It was perfect. It would never, *never* betray her!

The alarm system had lighted only that one set. She threw the switches for all of them, her eyes blazing and her jawline exaggerated as she peered from one to the other, looking suspiciously at everything that surrounded her. But all her world was empty —the north-bound lanes as they swept blackly by, the north-bound exit ramp, the automatic sewage disposal plant in its grove of trees behind the building, the south-bound entrance ramp, the generator building, the south-bound lanes, and finally the south-bound exit. Nothing moved. Only the heat shimmered, full of water mirages on the roadways.

She began to cry, and then a sudden awareness of her own hysteria made her fly into a sobbing rage. She railed at the unknown chemist who had first developed Lobotomol in the laboratories of a pharmaceutical manufacturer, years ago when the world was civilized. She cursed the stupidity that had rushed the drug on the market as a miracle cure for psychoses, neuroses, and Monday Morning Blues. She felt her stomach clench as she envisioned the bright young sales executive who inevitably came to demand, and get, a tasteless, odorless, non-allergenic form of the stuff, for oral dosage in cases where the patient would not hold still for the needle. And she cried out against the Food and Drug Administration because the stuff could be bought across any drugstore counter, without prescription, without supervision, without conscience.

She cursed at shadows, and knew it. No one could really know the true history of the drug's genesis, or ferret out the reasons for its instantaneous availability. Perhaps that first chemist had immediately put Lobotomol to its most logical use. He would have had to be a singular man to re-

sist the temptation to try and become master of the world. Then no one could be to blame for anything that happened afterwards.

No one would ever know, or untangle legend from fact. Lobotomol had killed Truth, and without Truth there is no civilization, no record of the past.

Lobotomol, the first manufacturer had said in the days when there were still newspapers and magazines to run the stories his public relations staff had planted, was simple to use. A small dose, administered intravenously, or later, orally, was immediately effective. Its action was directed against the forebrain, where it paralyzed the higher reasoning faculties for a period of several hours. During those hours, the patient would accept as truth anything anyone told him was truth. The drug itself wore off. The new truth, firmly established, as difficult to eradicate as any child's earliest training, stayed.

Lobotomol, that first manufacturer had hastened to explain, was of course intended for clinical use in the treatment of intractable psychotics. In the interval of the drug's action, such an individual's false, insane assumptions about the nature of the world could be explained to him. Powerless to resist the explanation, the psychotic mind would thus be taught sanity; would accept Reality; would be cured.

It was a great advance in psychiatric medicine, the manufacturer pointed out. And it was . . . it was. But simple neurosis, too, was based on mistaken thinking, and was often more difficult to bear than certifiable insanity. Neurosis, hitherto largely incurable, must also fall before "The Magic Bullet of The Mind." And simple household depression, too . . . for, after all, if a loving husband could convince his wife that things were *fine*—that she was glamorous and passionate beyond belief, withal a superb homemaker—wasn't that better for them both than nag, nag, nag, whine, whine, whine, all day, every day, after a hard day at the office and over a hot stove?

It was a great advance in psychiatric medicine—and it was put in the hands of anyone capable of searching out a drugstore and giving the druggist a dollar.

Perhaps, up to that point, it was simply all part of a criminal plot on the part of the discovering chemist. Or simple greed on the part of the pharmaceutical house. But no one would ever know, because it got into too many hands at once, and the murder of Truth proceeded exponentially.

What happened was that Truth came to depend on whose company you had been in last. The use of the drug proceeded not only exponentially but circulatorily. If things had gone a little more systematically, someone's plan for becoming Lord of All—or simply for showing everyone the Obvious True Way—would probably have reached fruition. But the thing spread too quickly, proliferating like wildfire, and men switched loyalties and drives a dozen times in the course of an afternoon. Everybody had it. Everybody used it, in simple

self-defense, frantically trying to create a sea of protective loyalty around himself, only to fall victim to someone else. It was everywhere—in the food you ate, in the water you drank, in the air you breathed if your best friend happened to think of spray guns . . .

First, no one ate in public anymore. Then, no one congregated in public places. Then came the realization that the only incorruptible individuals were the dead. Then—and by now civilization was collapsing—families split into suspicious fragments.

Even after civilization crumbled to the point where the stuff could no longer be manufactured, the downward tumble did not stop until the last cubic centimeter of the stockpiled supply had been exhausted, and the last protective murder had been done.

Then there was time to rest. Then there were also plagues, deficiency diseases, war, and universal psychosis, leveling out from sheer exhaustion into a rock-bottom society of truculent little villages and brooding, gloomy, brutal suspicion. All this inside a quarter-century, and Alma Petrie crouched at her alarms and detectors, hating the unknown chemist who had done this to her.

Alma Petrie moaned with tension and shut off all the television sets again—all but the one with its camera on the northbound entrance ramp. There *had* to be something out there. But where—where?

There. At the edge of the roadway, something heaved itself up from the ditch and into sight. It teetered on two spindly supports, inched forward with enormous persistence, and then collapsed across the lip of the ditch.

Open-mouthed, breathing harshly, Alma Petrie watched it gather itself, pull itself a little farther toward her, and resolve into a woman crawling on all fours.

She did not seem to look where she was going. Her head hung down between her arms, trailing its long hair on the ground. The woman was pulling forward with her hands, rather than pushing with her knees. She stopped after each effort, sagging on her locked elbows before nerving herself for the next attempt. She was actually on the asphalt surface of the ramp now, making no attempt to protect her face each time she fell sprawling. Rags, apparently torn from her skirt, were wrapped around her knees, and were stained.

Alma Petrie watched motionless. Outside, there was no movement of air to stir the dry shrubs. There was no sound of birds. The blazing sky was cloudless. Only the woman moved, crawling up the ramp with her maddening gait.

Hesitantly, Alma Petrie turned off the automatic weapons trained on the ramp. She watched, still unable to bring herself to do anything beyond that, quiet as death, scarcely conscious of breathing. And the woman on the ramp inched on and on, coming closer.

Alma Petrie had spent all twenty years of her adult life in the aban-

doned parkway restaurant. There had been a time when the place had great strategic desirability, for a bandit who wanted to control the commerce along that superb highway. The commerce had dwindled, trickled, and stopped. The bandit had died, he and his successors, under the guns Alma Petrie's father had placed, in the minefields, and in the traps. But if Alma Petrie had not learned then that death waited outside the building, she had learned it later, when a cruder and less ambitious kind of bandit had begun trying to get at her for the machine-woven cloth and steel cutlery—the riches beyond price in a world of hamlets and brush-choked roads.

Alma Petrie had watched them die, trying to get up the rise, trying to crawl up under cover of darkness, spitted by fragmentation shells in the pitiless infrared spotlights, stitched by the machine guns, tossed by the mines. She had watched them and wept, and at first, when they cried out with pain in the darkness, she tried to help them. But what she guarded was too precious for even dying men not to covet. They lay in wait and tried to stab her in the darkness as she came out to nurse them, and in a hundred ingenious ways they had tried to lure her. She had fled from them, and shut herself up, and finally no one tried to break through to her any more, but she had learned her lesson by that time.

She watched, breathless and agonized, while the woman crawled. She did not know what to do.

Then the woman collapsed and lay sprawled in the entrance to the parking area, her legs scraping back and forth on the asphalt, her hands pawing out in mindless reflex.

Alma Petrie could stand it no longer. She threw the switch that opened the narrow sliding steel door to the outside, and ran out of the building with a terrified pumping of her legs. After all, it was only one woman. Only one helpless woman, no doubt terribly wronged and hurt, who desperately needed help. Alma Petrie knew very well what could befall a woman in these times—her father had told her repeatedly and graphically. She had no difficulty imagining herself in the other's place.

She thought of men as she ran toward the fallen woman: rough, brawling brutes, stinking of liquor and mumbling swinishly when at last they crashed to the floor and their sotted brains lost all control of their vile bodies. She thought of men, and as she ran she gasped for air, her vocal cords stirring quite unconsciously and making peculiar sounds.

The woman was a thin-faced blonde with a waxy complexion and harsh lines at the corners of her mouth. Alma Petrie tugged at her, and she rolled over with her arms outflung. "Get—" she whispered, "Get . . . Danny . . . husband . . . down there . . ." One arm flapped palm-up, pointing down the ramp.

Husband! Alma Petrie whirled.

If she had known there were two of them—if she had seen the man

first . . . Alma Petrie sobbed. But she hadn't known, and the man had been out of sight of the cameras. Now it was too late. Now she had come outside. Now she was committed.

She ran to help him, flinging herself down the ramp as though all the pressures of the world had suddenly converged to shoot her down that one narrow pathway.

The man stopped dragging himself forward and waited for her, his head lifted. The sight of his youth, his handsomeness, and the lean angularity of his body were like a hammerblow to Alma Petrie.

There was nothing to do but help them inside. Somehow, Alma Petrie got them into the building, and sealed the door. She left them and re-set all the alarms and weapons in a flurry of panic, and then she went back to where they were slumped on the floor. The woman worked her way to her feet, pulling herself up the wall and pressing against it, her legs barely holding her. The man was pulling weakly at the dirt-encrusted rags and jagged lengths of wood that had been wrapped around his bare, swollen and discolored ankle.

"Farmers . . ." the man mumbled up at Alma Petrie. "Three days ago . . . We were trying to get to Princeton . . . Robbed us for our horse . . ."

The woman began to look around with burning eyes, whispering curses in a hissing, venomous voice.

Alma Petrie could not take her glance away from the man. She stared at him in fascination.

There were bits of leaves and dirt clinging to his short black beard and his hair. There was a smell of mud and leaf-mold about him, and his clothes were in shreds. His face was distorted by pain, drawn with hunger and exhaustion, badly bruised where something had struck his cheekbone. But he was fantastically handsome, with thick, regular brows, long-lashed eyes and full lips.

"Didn't know there was anybody in here. . . . looking for shelter . . ." he mumbled.

"We need food," the woman said harshly. "We need to get clean. We need clothes. Danny's ankle needs a cast. Are you going to help us?"

Alma Petrie looked up at last. The woman clung to the wall, her eyes intent on Alma Petrie's face. "We've been in the woods three days. No food, and drinking out of creeks so dried up it was like eating mud. We're through. Are you going to help us any?"

The driven sibilance of her voice finally cut through to Alma Petrie's consciousness.

"Yes. I'll help you. Yes. But I don't have the strength to drag you any farther. Can you get to the next room by yourselves? That's where I live. That's where everything is."

"I can make it," the woman said. "But Danny can't. Quit mooning over him and help him in there."

"Mooning?"

The woman gave her no answer.

She pushed herself away from the wall and, keeping one hand pressed against it, began working her way toward the door into what had once been the dining room and was now Alma Petrie's living quarters. She hobbled stiff-legged, without bending her knees, and an edge of fresh red began to show under her bandages. After the first few steps she put both hands on the wall and mauled her lower lip between her teeth, but, moving sideways, she continued to inch toward the door without speaking.

"I think if you helped me get up . . ." the man said faintly, "I could lean on you and make it on one foot."

Lean on me, Alma Petrie thought. Lean on me. Oh, I *can't*—But she stooped and clutched him around the shoulders, gasping with effort as she lifted him. He took her forearms and pulled himself upward, almost upsetting her balance, but somehow she managed to stand up with him and let him throw one arm over her shoulders. Hopping and stumbling, he reached the doorway with her.

The weight of him, Alma Petrie thought—the strong weight of him! She opened the door, and the hard-eyed woman tottered into the room ahead of her. Then Alma Petrie could bring the man in and let him sink to rest on her bed.

She straightened up and found the woman slumped down in a chair, sneering at her.

There was plenty of canned and radio-sterilized food from the restaurant stockroom. Some of it had been there when her father took possession of the place. Some of it had been brought in during the eighteen months in which he had created this refuge. There was plenty, but there was only one-tenth as much as there had been once.

Alma Petrie prepared a meal in the one part of the kitchen left unchanged when her father took the remainder of the space for his laboratory. She brought food to the couple, together with tap water from the restaurant's power-pumped well. The restaurant was a self-sufficient island to itself, set down on the parkway with no reference to preexisting towns or cities, independent of municipal services. It had supported and nourished Alma Petrie for twenty years, fifteen of which she had been the only drain on its resources. The pumps, the sewage disposal, the generator—all worked, all worked alone, all worked silently, except for, here and there, the insidious rasp of a decaying bearing.

Alma Petrie searched through the medicine chest for a traction splint, antiseptics, and bandages. She brought them back to the couple, and tended the man first, while he and the woman ate.

She washed his lower leg, keeping her head bent away from the woman's look, and locked the splint in place. He paid no attention to her, wolfing down the strips of fried meat and gulping at his glass of water, but when she was finished he smiled brilliantly and said: "That feels much better, thank you." The food had given him back some of his drained energy, and for the first time she heard him in what must have been his normal, well-modulated, somewhat throaty voice.

"You're . . . you're welcome. It wasn't anything." The sound of her own voice did not so much surprise as it did dismay her. She had spoken to no one in fifteen years, except for those hastily extinguished lapses when she caught herself talking to the past.

"Don't worry, Danny," the woman barked wolfishly. "We'll be paying for it."

Alma Petrie looked at the woman in bewilderment. "I don't understand what you mean. I don't expect payment."

"Don't you? Don't you? You don't see us as two handy slaves?"

"Slaves? How?"

The woman laughed. "Don't play innocent with me! I'm not dumb. I've been looking around. And I don't just mean I've been watching you make sheep's eyes at Danny."

"Wh . . .?"

"Shut up!" the woman cried out, her face suddenly twisted in frustrated rage. "You think I would have eaten your food if I thought we could get some somewhere else? You think I wouldn't have tried to get Danny

out of here, if I thought he could go any farther? What do you think I am, silly or something? You've got us. You've got us where we've got to trade full bellies for free will." She went on bitterly: "Did you put it in our food, or are you going to wait and give us needles when we're asleep?"

"I . . . I *don't* understand . . ."

"The Lobotomol!" the woman exploded. "The Lobotomol, you nitwit!"

Alma Petrie stared in astonishment and fear. "Nonsense!" she said. "Lobotomol is an extremely complex chemical. The technology is far below a point where any of it could possibly be manufactured now."

"Yah!" the woman cried in a louder and more hysterical voice. "I'm no dope!" She waved at the room. "Electric lights, electric alarms, decent food, medicines . . . You've got all that, and you don't have Lobotomol? You wouldn't use it? How else is a dried up old bag like you going to get herself a man?"

"That's nonsense!" Alma Petrie gasped. "Vicious nonsense. I don't have to listen to any more of it!" And she burst out of the room, flinging herself into the old kitchen, where the laboratory was and the supply of Lobotomol was kept.

Lobotomol had not of itself been a project of research and development. That is, no one had predicted it in theory, developed it experimentally, and then undertaken a program leading to a commercial production process. Pharmacology is not that kind of a science, in the main. The basic product from which Lobotomol derived was intended for an only distantly related medical use. It was itself the product of a complex industrial process requiring a great deal of heavy equipment, as well as delicate treatment at many stages. The organic chemist who discovered Lobotomol had been a technician on a routine job—running through by-products from the basic process, in search of anything useful —and he came upon it as only the latest in a series of hundreds.

That fact had ultimately been Humanity's salvation. No one had ever worked out a means of making the stuff in the bathtub at home. It had more than likely been tried, but no one had succeeded in those confused days when all kinds of normally accessible supplies and facilities had stopped being accessible or workable. The only known way to make it was to lay in a huge stock of the parent compound—one of the standard pain-killers—and run it through a plant a block long. It was easily done if you had the plant and the trained staff, and could maintain them.

It had been left for Alma Petrie's father to discover the shortcut home laboratory method, and that knowledge had been born in this building and never left it.

Theron Petrie had been a stoop-

shouldered, waspishly thin man with an impatient curl to the corners of his mouth and a gleam of genius burning in his eyes. Splenetic, shrill, and altogether unpleasant to the vast number of people who were slower-witted than he, he had effectively wrecked his life and buried his talent by making himself intolerable to the society of Man. His thought-processes were unblinkingly quick and deadly accurate. His ability to associate a known fact with a new conjecture and thus arrive at an unshakable new postulate was founded on an eidetic memory and an enormous store of data. If he did not know everything there was to know, it was only because life was too short. The only thing he seemed incapable of learning, as a matter of record, was the fact that people with a slower associational speed were nevertheless not to be accounted insignificant.

He had graduated brilliantly from McGill, and taken his biology doctorate at Johns Hopkins before the beard was fairly started on his prominent cheekbones. He had the distinction of never having made a friend anywhere he studied. His instructors tolerated him only because of his intelligence—they could not very well like a man with a habit of shouting "Nonsense!" in their faces. They were glad to see the last of him, and he, in turn, was at least as glad to be free to closet himself in a research laboratory, where he would not have to deal with any mind but his own.

But nothing in this world has been that simple since the first emergence of Business Administration as a craft. Theron Petrie was not independently wealthy. He could not build his own facilities, or hare off on his own pursuits. Wherever he went, whatever he did, he had to deal with someone in charge of things. And that was flatly impossible for him. He could discharge his assistants for incompetence and impertinence, and Personnel would always find new ones for him. But he could not attempt to tell a Director of Research that the company ought to revise all its plans and reschedule all its projects. He might be a genius, but he could not deliver what he was paid for. He could not get it through his head that the company had a right to hire him for a certain kind of work and then insist he do it. He could not assimilate the fact that a company could recognize his talent by hiring him for a considerable sum, and still, once it had taken his measure, want to get rid of him as soon as it could break his contract.

It made no sense to him. He flung himself from one employment to another with a blind, foaming desperation, and in a very few years he was virtually unemployable.

At the time Lobotomol was discovered by a man one-twentieth as clever, Theron Petrie was a seedy man in a sleazy job with a third-rate patent medicine mill. He had acquired a sickly, disappointed wife and begotten a frail and by now

adolescent daughter, both of whom he crushed with his vicious personality when the one stopped worshiping his intellect and the other could not outthink him. He persecuted his assistants and held his job only by doing the work of four men at one-fifth the expense. When he was assigned the job of pirating Lobotomol, he did so with great speed and pathological joy. The result was that his company did a great deal more than its share toward flooding the market.

But he *was* a genius. He could see what was coming, and he could apply all his fantastic energies toward doing something about it.

What he did was to spend weeks scouting a suitable location and meanwhile acquiring all the supplies needed to fulfill a superbly well thought-out list of requirements. The day the restaurant was abandoned by its staff, he moved in and set to work establishing a fortress. The proper defense system was the result of a great deal of advance study in unaccustomed branches of science, but this was as nothing to his genius, properly driven. He put his family in the fortress almost as an afterthought, and set to work.

For it was obvious to him that any fool could discover Lobotomol, but a man of Theron Petrie's caliber was required to develop an antigen. Some compound that could be retained harmlessly by the body—or perhaps one that, once introduced, would stimulate a self-perpetuating reaction—and which, upon contact by Lobotomol, would neutralize the stuff before it could set to work. This, too, ought to be easily manufactured and simply administered.

He anticipated no real trouble. He anticipated the boundless wealth and acclaim that Society could no longer begrudge him, no matter how much it might plot to thwart him. He dreamed of these things while he set up his laboratory, and he sang at his work.

His wife was his only assistant. At first she worked willingly enough, doing what he told her, while their wan daughter hung about in the background and watched from out-of-the-way corners. But several months went by, and then several years, and Theron Petrie was not much closer to his goal. It was all very well for Thomas Edison to say, at one point, that now he knew two thousand sure ways that would *not* produce a practical incandescent lamp. The pressures on Theron Petrie, and his family, were of a different order.

By the time Petrie's wife died from the effects of his latest experiment, the family atmosphere had been at a murderous pitch for some years. The event came as a perfect, almost trite climax to a rising tide of emotional tension, and, tritely, Theron Petrie took to drink. Whether from love or rage, his daughter was unequipped to judge.

Whichever it was, he began by taking one drink of alcohol and

water after supper every night, on the basis that he needed relaxation and could handle it without any effect on his intellect. Alma Petrie was also not equipped to know that some people are instinctive abstainers because they have no tolerance for alcohol, and that once the abstinence is broken there is very little chance of going back.

In short order, Theron Petrie was a drunk. He followed the classic barroom "Professor" pattern, spitefully mumbling snatches of erudition at his daughter while half his drink splashed onto his sleeve. But he did not become a hopeless case until his final series resulted in the accidental discovery of the short-cut method for producing Lobotomol.

That was too much. Brilliant Theron Petrie could not stand against that blow—nor did he try very hard. With malice and in terrible bitterness he did one more useful thing in his life: between bouts of delirium tremens, he took his stupid daughter's dull mind and poured into it as much of his knowledge as he could transmit, forcing it on her like a man making a phonograph record on a blank disk. It came out of him in mumbling gobbets and shouted freshets, disorganized and sometimes incomprehensible. He was not teaching—he was carving his own memorial—and he bullied and beat Alma Petrie, and cursed her incessantly, like a bad sculptor with stiff clay, and she, with her defenses long since beaten down, absorbed it all in a kind of numb fit.

Alma Petrie, standing stock-still in the restaurant kitchen, clenched the edge of a sink and remembered, a soft, tense whine vibrating unheard in her throat.

"Listen, you clod—" With an iron claw of his hand around her wrist, he dragged his face closer to hers and shouted: *"Listen,* you miserable travesty of a thinking being, are you ever going to get this *right?* What else have you got to do with your brain? What else is in it to get in the way?" He snorted and let go of her, falling back in his chair. He gulped at his glass and looked at her hollow-eyed, his pale face wet with perspiration.

"You poor, miserable moron," he mumbled. "I feel sorry for you. What chance have you got? Someday there won't be anybody here to protect you, and inside of a month you'll be dead. Or worse. You're not equipped to deal with this world—or any other, for that matter. You're a hangover from the days when Society could afford to support incompetents . . . yah, afford; afforded itself straight to hell . . . and the least you could do is *listen, instead of sitting there sniveling!"*

"I . . . I'll try to do better, father," Alma Petrie promised tearfully.

Then, one night, Theron Petrie looked up at the stars through one of his TV screens, croaked, "Why?" in a stuporous breath, collapsed, and died. So Alma Petrie was left alone, impregnable, with a liter of Lobotomol and her memories of her father. So she remained for years.

She came out of the laboratory after a while, with the freshly sealed syrette held tightly in the fist of her left hand, and with her left arm pressed against her side. The woman and her husband looked at Alma Petrie, the woman with a sneer and the husband with a smile that obviously came to him as automatically as breathing. Alma Petrie looked back at him and felt her knees turn to water.

"All over your little tantrum?" the woman asked.

Alma Petrie nodded. She could not keep her eyes off the man. His expression grew curious, and he raised his shoulders from the bed.

The woman laughed. "They all like you, Danny. It's those cow eyes of yours."

"Stop it," Alma Petrie muttered.

"Bother you?"

"Cut it out, Iris!" the man complained.

"Shut up," the woman said.

"What are you trying to make of this?" Alma Petrie cried. "I haven't done anything. Or said anything. All I've done is take you two in and give you shelter. What's the matter with you?"

"What's the matter with *me?* Look at you — you're shaking." The woman tried to stand up, and fell back. "All right," she muttered. "I just want you to know he's no good. He's up to the ears in education, but he's no good at all. I had to push, push, push all the time. If I hadn't dragged him this far, he'd be lying dead in a ditch by now. He would have got himself killed ten years ago. The only reason I've kept him alive is because he's a chemist." She snarled at Alma Petrie. "You'd better take him quick. If you don't, I'll still figure out some way to push him into turning out Lobotomol. Because *I'm* not going to go around like this all my life." She thumped her breastbone. "I'm going to be rich! I'm going to have a house, and servants, and good clothes, and men-at-arms to protect me . . . What's that in your hand!"

Alma Petrie had sobbed, and started across the room. The man drew himself up in a bundle of fear. The woman flung herself to her quivering feet, her clawed hands outstretched.

But Alma Petrie got across the room, and the syrette's glittering point was sunk in the man's arm. Alma Petrie squeezed the tube, and the man cried out. He clutched his arm and stared down at the welling blot of red.

The woman toppled against Alma Petrie, scratching at her face. "You . . . I'll *kill* you!"

Crying, Alma Petrie tore herself away. "Look!" she shouted hoarsely, wiping the needle on a scrap of alcohol-soaked cotton. She dug the syrette into her own arm and forced another cubic centimeter out of the 3cc syrette. "It isn't what you think," she sobbed. "It *isn't* what you think." The woman was staring at her, dumfounded, and Alma Petrie stabbed

out once more. Then her fingers crumpled the unbreakable flexible plastic, and she threw the empty syrette down. "It's not Lobotomol," Alma Petrie sobbed. "It's the antigen. The three of us are permanently immune. Nobody can ever force us to do anything we don't want to."

She looked at the man. Just one, she thought. Just one person to love me. That's all I want. But after that one—how do I know I won't want more, and more? How do I know that I, of all the people in the world, would be strong enough never to use Lobotomol again?

She had made her choice, and made it alone, in the laboratory, where no one could watch her face to see how much it cost her.

"It's the antigen," Alma Petrie whispered to the woman. "And I can never, never steal your man from you. Are you satisfied?"

Theron Petrie's stupid daughter hadn't died without him. It had been months before she realized she would be alone for years, to the end of her life, with the outside world too dangerous to live in. But once she did realize it, she began groping about for something to do.

There was only one thing she knew how to do, and only one thing the laboratory was equipped for. And she had had years in which to work.

"I'm not stupid," Alma Petrie blurted at the woman. "I'm not!" She lifted her face and cried out: "Do you hear me?" Then, out of some other complexity in herself, she whispered: "I'm sorry."

"Holy smoke!" the man shouted happily. "We're *in*, Iris! We're rich! We've got it made!"

The woman's eyes narrowed. She peered at Alma Petrie. "Yes," she said slowly. "I think you're right. She's not kidding. She's got the stuff. Look at her—she isn't trying to give us orders." The woman exchanged a glance with the man. "It's perfect. She stays here and turns it out, and the two of us start slipping into these hick towns with it. They'll pay through the nose for it."

"Yah!" the man exhulted. "This is *better* than Lobotomol! I figure we can get two, three times as much for it. Wow! Think of all those people, waitin' for the day they could get Lobotomol again, savin' up those hypos and those bottles. Think of the people that've been hoarding some of it, maybe giving somebody a quiet dose now and then." He began to laugh. "Think of the looks on their faces. One shot of this stuff of Pruneface's, here, and that's all over. Boy, that's gonna make one doozey of a tinkle, when all those hypos get thrown away!"

Alma Petrie was sobbing into her hands, her shoulders shaking, hardly hearing what the other two were saying, knowing only that something tightly coiled within her had broken at last.

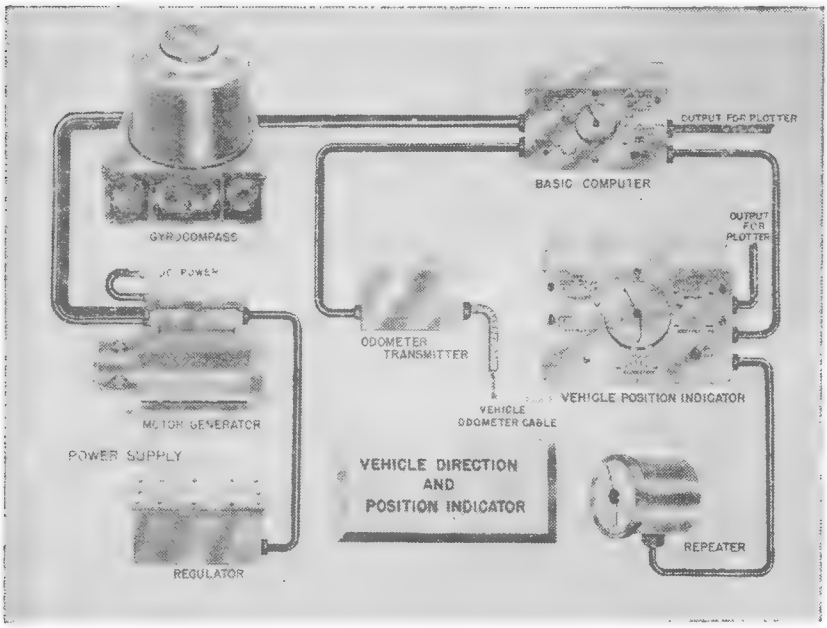
Theron Petrie had saved the world.

THE END

FICTION? REALITY!

BY LT. JAMES W. OWEN

A while back we ran a fiction story —and the problem of the modern science-fictioneer is keeping ahead of science fact. Sorry—it seems we were decidedly behind the facts!



This combat vehicle position computer system facilitates accurate land navigation in the Arctic.

IN THE December, 1958, issue of Astounding Science Fiction there was a story called "Seller's Market," by Christopher Anvil. In most cases we all know that the science-fiction stories are ahead of the development but this story is behind the times.

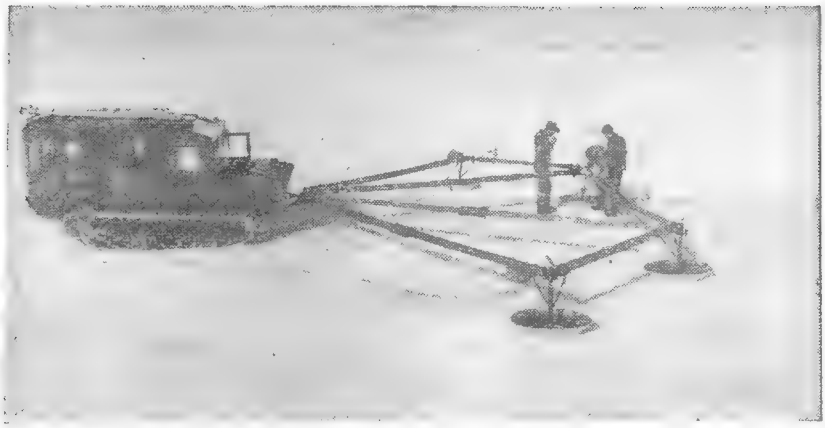
There were two problems presented in this story which have been solved by the United States Army Engineer Research and Development Laboratories (USAERDL), Fort Belvoir, Virginia. The more difficult of the two problems concerned the navigation of a tracked vehicle, under arctic conditions, from one point to another without the use of a map when the direction and distance to a destination are known.

USAERDL has developed and tested a Combat Vehicle Position Computer (CVPC) for use in land navigation. This CVPC will, when set with the grid co-ordinates of the starting point, give a continuous reading of the present position co-ordinates as the vehicle travels. In addition the distance and direction to a selected destination is displayed by the system.

The information is shown to a driver by two pointers on a compass dial. The smaller pointer shows the direction of travel, and the larger pointer shows the direction to the destination. Once the present position co-ordinates and those of a destination are set on the CVPC, all one has to do is drive in the direction shown by the larger of the two pointers. When the distance to the destination is zero, one knows the destination has been obtained. With the accuracy of the present system it is possible to drive fifty miles and be within one and one-half block radius (750 feet) of the true position. Even if one could see only a very short distance, it would then be possible to search the area without becoming lost.

The CVPC is built in three sections: (a) the gyro compass, (b) the odometer, and (c) the computer. The gyro compass is positioned by small electric motors so that its axis of rotation is horizontal to the ground. The gyro then points true north because there are fewer forces acting on it in that direction. The polar co-ordinate data, provided by the gyro compass and the odometer, are summed and converted to rectangular co-ordinates by the computer. This information is then displayed by the Position Computer Indicator. Not only is the present position, present direction of travel, direction to destination information automatically shown by the CVPC, but a telemeter and/or plotting board may be attached.

The simpler of the problems presented in "Seller's Market" was one of being able to detect tunnels under the snow and ice. The detection of the tunnels would have been simple with the crevasse detector system developed and tested by USAERDL. When tested in Greenland the system was able to detect all the known



Crevasse detector has been a "lifesaver" for personnel operating in the Arctic.

crevasses which before had been detectable only by a man on foot with a probe. Basically this system consists of two parts: the transmitter which emits sixty cycles per second current into the snow, and the receiver which detects the resulting voltage—due to the transmitter current—between the vehicle and a point about twenty feet to the front of the vehicle. The voltage is detected and measured by a rectifier and vacuum tube volt meter mounted in the vehicle. When there is a sudden change in the voltage between the vehicle and the forward probe, a break, a crevasse, or in this case a tunnel in the snow would be indicated.

Technology has advanced considerably since Scott and Peary traveled the arctic waste with dog teams by the use of celestial navigation. Even with the amazing imagination and deduction of the science-fiction writers, technology is moving so fast that tomorrow's science fiction is today's reality.

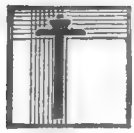
...OR

BY DAVID GORDON

Illustrated by Summers

YOUR MONEY BACK

There are lots of things that are considered perfectly acceptable...provided they don't work. And of course everyone knows they really don't, which is why they're acceptable....



HERE are times when I don't know my own strength. Or, at least, the strength of my advice. And the case of Jason Howley was certainly an instance of one of those times.

When he came to my office with his gadget, I heard him out, trying to appear both interested and cooperative—which is good business. But I am forced to admit that neither Howley nor his gadget were very impressive. He was a lean, slope-shouldered individual, five-feet-eight or nine—which was shorter than he looked—with straight brown hair combed straight back and blue eyes which were shielded with steel-rimmed glasses. The thick, double-concave lenses indicated a degree of myopia that must have bordered on total blindness without glasses, and acute tunnel vision, even with them.

He had a crisp, incisive manner that indicated he was either a man who knew what he was doing or a man who was trying to impress me with a ready-made story. I listened to him and looked at his gadget without giving any more indication than necessary of what I really thought.

When he was through, I said: "You understand, Mr. Howley that

I'm not a patent lawyer; I specialize in criminal law. Now, I can recommend—"

But he cut me off. "I understand that, counselor," he said sharply. "Believe me, I have no illusion whatever that this thing is patentable under the present patent system. Even if it were, this gadget is designed to do something that may or may not be illegal, which would make it hazardous to attempt to patent it, I should think. You don't patent new devices for blowing safes or new drugs for doping horses, do you?"

"Probably not," I said dryly, "although, as I say, I'm not qualified to give an opinion on patent law. You say that gadget is designed to cause minute, but significant, changes in the velocities of small, moving objects. Just how does that make it illegal?"

He frowned a little. "Well, possibly it wouldn't, except here in Nevada. Specifically, it is designed to influence roulette and dice games."

I looked at the gadget with a little more interest this time. There was nothing new in the idea of inventing a gadget to cheat the red-and-black wheels, of course; the local cops turn up a dozen a day here in the city. Most of them either don't work at all or else they're too obvious, so the users get nabbed before they have a chance to use them.

The only ones that really work have to be installed in the tables themselves, which means they're used to milk the suckers, not rob the management. And anyone in the State of Nevada who buys a license to operate and then uses crooked wheels is (a) stupid, and (b) out of business within a week. Howley was right. Only in a place where gambling is legalized is it illegal—and unprofitable—to rig a game.

The gadget itself didn't look too complicated from the outside. It was a black plastic box about an inch and a half square and maybe three and a half long. On one end was a lensed opening, half an inch in diameter, and on two sides there were flat, silver-colored plates. On the top of it, there was a dial which was, say, an inch in diameter, and it was marked off just exactly like a roulette wheel.

"How does it work?" I asked.

He picked it up in his hand, holding it as though it were a flashlight, with the lens pointed away from him.

"You aim the lens at the wheel," he explained, "making sure that your thumb is touching the silver plate on one side, and your fingers touching the plate on the other side. Then you set this dial for whatever number you want to come up and concentrate on it while the ball is spinning. For dice, of course, you only need to use the first six or twelve numbers on the dial, depending on the game."

I looked at him for a long moment, trying to figure his angle. He looked back steadily, his eyes looking like small beads peering through

the bottoms of a couple of shot glasses.

"You look skeptical, counselor," he said at last.

"I am. A man who hasn't got the ability to be healthily skeptical has no right to practice law—especially criminal law. On the other hand, no lawyer has any right to judge anything one way or the other without evidence.

"But that's neither here nor there at the moment. What I'm interested in is, what do you want me to do? People rarely come to a criminal lawyer unless they're in a jam. What sort of jam are you in at the moment?"

"None," said Howley. "But I will be very soon. I hope."

Well, I've heard odder statements than that from my clients. I let it ride for the moment and looked down at the notes I'd taken while he'd told me his story.

"You're a native of New York City?" I asked.

"That's right. That's what I said."

"And you came out here for what? To use that thing on our Nevada tables?"

"That's right, counselor."

"Can't you find any games to cheat on back home?"

"Oh, certainly. Plenty of them. But they aren't legal. I wouldn't care to get mixed up in anything illegal. Besides, it wouldn't suit my purpose."

That stopped me for a moment. "You don't consider cheating illegal? It certainly is in Nevada. In New York, if you were caught at it, you'd have the big gambling interests on your neck; here, you'll have both them *and* the police after you. *And* the district attorney's office."

He smiled. "Yes, I know. That's what I'm expecting. That's why I need a good lawyer to defend me. I understand you're the top man in this city."

"Mr. Howley," I said carefully, "as a member of the Bar Association and a practicing attorney in the State of Nevada, I am an Officer of the Court. If you had been caught cheating and had come to me, I'd be able to help you. But I can't enter into a conspiracy with you to defraud legitimate businessmen, which is exactly what this would be."

He blinked at me through those shot-glass spectacles. "Counselor, would you refuse to defend a man if you thought he was guilty?"

I shook my head. "No. Legally, a man is not guilty until proven so by a court of law. He has a right to trial by jury. For me to refuse to give a man the defense he is legally entitled to, just because I happened to think he was guilty, would be trial by attorney. I'll do the best I can for any client; I'll work for his interests, no matter what my private opinion may be."

He looked impressed, so I guess there must have been a note of conviction in my voice. There should have been, because it was exactly what I've always believed and practiced.

"That's good, counselor," said Howley. "If I can convince you that I have no criminal intent, that I have no intention of defrauding anyone or conspiring with you to do anything illegal, will you help me?"

I didn't have to think that one over. I simply said, "Yes." After all, it was still up to me to decide whether he convinced me or not. If he didn't, I could still refuse the case on those grounds.

"That's fair enough, counselor," he said. Then he started talking.

Instead of telling you what Jason Howley *said* he was going to do, I'll tell you what he *did* do. They are substantially the same, anyway, and the old bromide about actions speaking louder than words certainly applied in this case.

Mind you, I didn't see or hear any of this, but there were plenty of witnesses to testify as to what went on. Their statements are a matter of court record, and Jason Howley's story is substantiated in every respect.

He left my office smiling. He'd convinced me that the case was not only going to be worthwhile, but fun. I took it, plus a fat retainer.

Howley went up to his hotel room, changed into his expensive evening clothes, and headed out to do the town. I'd suggested several places, but he wanted the biggest and best—the Golden Casino, a big, plush, expensive place that was just inside the city limits. In his pockets, he was carrying less than two hundred dollars in cash.

Now, nobody with that kind of chicken feed can expect to last long at the Golden Casino unless they stick to the two-bit one-armed bandits. But putting money on a roulette table is in a higher bracket by far than feeding a slot machine, even if you get a steady run of lemons.

Howley didn't waste any time. He headed for the roulette table right away. He watched the play for about three spins of the wheel, then he took out his gadget—in plain sight of anyone who cared to watch—and set the dial for thirteen. Then he held it in his hand with thumb and finger touching the plates and put his hand in his jacket pocket, with the lens aimed at the wheel. He stepped up to the table, bought a hunder dollars worth of chips, and put fifty on Number Thirteen.

"No more bets," said the croupier. He spun the wheel and dropped the ball.

"Thirteen, Black, Odd, and Low," he chanted after a minute. With a practiced hand, he raked in the losers and pushed out Howley's winnings. There was sixteen hundred dollars sitting on thirteen now. Howley didn't touch it.

The wheel went around and the little ball clattered around the rim and finally fell into a slot.

"Thirteen, Black, Odd, and Low," said the croupier. This time, he didn't look as nonchalant. He peered curiously at Howley as he pushed out the chips to make a grand total of fifty-one thousand two hundred dol-

lars. The same number doesn't come up twice in succession very often, and it is very rare indeed that the same person is covering it both times with a riding bet.

"Two thousand limit, sir," the croupier said, when it looked as though Howley was going to let the fifty-one grand just sit there.

Howley nodded apologetically and pulled off everything but two thousand dollars worth of chips.

The third time around, the croupier had his eyes directly on Howley as he repeated the chant: "Thirteen, Black, Odd, and Low." Everybody else at the table was watching Howley, too. The odds against Howley —or anyone else, for that matter— hitting the same number three times in a row are just under forty thousand to one.

Howley didn't want to overdo it. He left two thousand on thirteen, raked in the rest, and twisted the dial on his gadget over a notch.

Everyone at the table gasped as the little ball dropped.

"That was a near miss," whispered a woman standing nearby.

The croupier said: "Fourteen, Red, Even, and Low." And he raked in Howley's two thousand dollars with a satisfied smile. He had seen runs of luck before.

Howley deliberately lost two more spins the same way. Nobody who was actually cheating would call too much attention to himself, and Howley wanted it to look as though he were trying to cover up the fact that he had a sure thing.

He took the gadget out of his pocket and deliberately set it to the green square marked 00. Then he put it back in his pocket and put two thousand dollars on the Double Zero.

There was more than suspicion in the croupier's eyes when he raked in all the bets on the table except Howley's. It definitely didn't look good to him. A man who had started out with a fifty-dollar bet had managed to run it up to one hundred seventy-four thousand two hundred dollars in six plays.

Howley looked as innocent as possible under the circumstances, and carefully dropped the dial on his gadget back a few notches. Then he bet another two thousand on High, an even money bet.

Naturally, he won.

He twisted the dial back a few more notches and won again on High.

Then he left it where it was and won by betting on Red.

By this time, of course, things were happening. The croupier had long since pressed the alarm button, and five men had carefully surrounded Howley. They looked like customers, but they were harder-looking than the average, and they were watching Howley, not the wheel. Farther back from the crowd, three of the special deputies from the sheriff's office were trying to look inconspicuous in their gray uniforms and white Stetsons and pearl-handled revolvers in black holsters. You can

imagine how inconspicuous they looked.

Howley decided to do it up brown. He reset his gadget as surreptitiously as possible under the circumstances, and put his money on thirteen again.

"Thirteen, Black, Odd, and Low," said the croupier in a hollow voice.

The five men in evening dress and the three deputies moved in closer.

Howley nonchalantly scraped in his winnings, leaving the two thousand on the thirteen spot.

There was a combination of hostility and admiration in every eye around the table when the croupier said, "Thirteen, Black, Odd, and Low" for the fifth time in the space of minutes. And everyone of those eyes was turned on Jason Howley.

The croupier smiled his professional smile. "I'm sorry, ladies and gentlemen; we'll have to discontinue play for a while. The gentleman has broken the bank at this table." He turned the smile on Howley. "Congratulations, sir."

Howley smiled back and began stacking up over three hundred thousand dollars worth of plastic disks. It made quite a pile.

One of the deputies stepped up politely. "I'm an officer, sir," he said. "May I help you carry that to the cashier's office?"

Howley looked at the gold star and nodded. "Certainly. Thanks."

The other two deputies stepped up, too, and the three of them walked Howley toward the cashier's of-

fice. Behind them came the five men in dinner jackets.

"You'll have to step into the office to cash that much, sir," said one of the deputies as he opened the door. Howley walked in as though he hadn't a care in the world. He put his chips on the desk, and the deputies followed suit, while one of the dinner-jacketed men closed the door.

Then one of the deputies said: "I believe this gentleman is carrying a gun."

He had his own revolver out and had it pointed at Howley's middle. "Carrying a concealed weapon is illegal in this city," he went on. "I'm afraid we'll have to search you."

Howley didn't object. He put his hands up high and stood there while his pockets were frisked.

"Well, well," said the deputy coolly. "What on Earth is this?"

It was Howley's gadget, and the dial still pointed to Thirteen—Black, Odd, and Low.

The next morning, I went down to the jail in response to a phone call from Howley. The special deputies had turned him over to the city police and he was being held "under suspicion of fraud." I knew we could beat that down to an "attempt to defraud," but the object was to get Howley off scott-free. After Howley told me the whole story, I got busy pushing the case through. As long as he was simply being held on suspicion, I couldn't get him out on bail, so I wanted to force the district attorney or the police to prefer charges.

Meanwhile, I made sure that Howley's gadget had been impounded as evidence. I didn't want anyone fiddling with it before the case went to court—except, of course, the D. A. and his men. There wasn't much I could do to keep it out of *their* hands.

After throwing as much weight around as I could, including filing a petition for a writ of habeas corpus with Judge Grannis, I went over to Howley's hotel with a signed power of attorney that Howley had given me, and I got a small envelope out of the hotel safe. It contained a baggage check.

I went over to the bus depot, turned over the check to the baggage department, and went back to my office with a small suitcase. I locked myself in and opened the case. Sure enough, it contained three dozen of the little gadgets.

Then I sat down to wait. By noon, Judge Grannis had issued the writ of habeas corpus, and, rather than release Jason Howley, the police had booked him, and District Attorney Thursby was getting the case ready for the grand jury. There was over a quarter of a million dollars at stake, and the men behind the Golden Casino were bringing pressure to bear. If Howley wasn't convicted, they'd have to give him his money—and that was the last thing they wanted to do. A quarter of a million bucks isn't small potatoes, even to a gambling syndicate.

It wasn't until early on the morning of the third day after Howley's arrest that I got a tip-off from one of my part-time spies. I scooped up the phone when it rang and identified myself.

"Counselor? Look, this is Benny." I recognized the voice and name. Benny was one of the cabbies that I'd done favors for in the past.

"What's the trouble, Benny?"

"Oh, no trouble. I just got a little tip you might be interested in."

"Fire away."

"Well, the D.A. and some of his boys went into the Golden Casino about ten minutes ago, and now they're closin' up the place. Just for a little while, I understand. Hour, maybe. They're chasin' everyone out of the roulette room."

"Thanks, Benny," I said, "thanks a lot."

"Well, I knew you was working on that Howley case, and I thought this might be important, so I—"

"Sure, Benny. Come by my office this afternoon. And thanks again."

I hung up and started moving.

Within ten minutes, I was pulling up and parking across the street from the Golden Casino. I locked the car and dodged traffic to get across the street, as though I'd never heard of laws against jaywalking.

There were still plenty of people in the Casino. The bar was full, and the dice and card games were going full blast. The slot machines were jangling out their infernal din while fools fed coins into their insatiable innards.

But the roulette room was closed, and a couple of be-Stetsoned deputies were standing guard over the entrance. I headed straight for them.

Both of them stood pat, blocking my way, so I stopped a few feet in front of them.

"Hello, counselor," said one. "Sorry, the roulette room's closed."

I knew the man slightly. "Let me in, Jim," I said. "I want to see Thursby."

The men exchanged glances. Obviously, the D.A. had given them orders.

"Can't do it, counselor," said Jim. "We're not to let anyone in."

"Tell Thursby I'm out here and that I want to see him."

He shrugged, opened the door, stuck his head inside, and called to District Attorney Thursby to tell him that I was outside. I could hear Thursby's muffled "Damn!" from within. But when he showed up at the door, his face was all smiles.

"What's the trouble?" he asked pleasantly.

I smiled back, giving him my best. "No trouble at all, Thursby. I just wanted to watch the experiment."

"Experiment?" He looked honestly surprised, which was a fine piece of acting. "We're just checking to see if the table's wired, that's all. If it is, your client may be in the clear; maybe we can hang it on the croupier."

"And get a conspiracy charge on my client, too, eh? Well, if you

don't mind, I'd like to watch that table check myself. You know how it is."

Thursby hesitated, then he scowled. "Oh, all right. Come on in. But stay out of the way."

I grinned. "Sure. All I want to do is protect my client's interests."

Thursby just grunted and opened the door wider to let me in. He was a shrewd lawyer, a good D.A., and basically honest, even if he did have a tendency to bend under pressure from higher up.

They were checking the table, all right. They had three specialists going over it with everything from fine tooth combs to Geiger counters. They found nothing. No magnets, no wires, no mechanical gimmicks. Nothing.

It took them an hour to take that table apart, check it, and put it back together again. When it was all over, Thursby glanced at me, then said: "O.K., boys; that does it. Let's go."

The men looked at him oddly, and I knew why.

"Aren't you going to test my client's gadget?" I asked innocently.

Thursby looked angrily baffled for a moment, then he clamped his lips grimly. "As long as we're here, I guess we might as well."

I knew perfectly well it was what he had intended to do all along.

"One of you guys spin that wheel," he said to the technicians. One of them gave the wheel a spin and dropped the ball. It clattered on its merry way and dropped into a slot. Forty-two.

Thursby took the gadget out of his pocket. It was still set at Thirteen.

The men who had surrounded Howley on the night of his arrest had been keeping their eyes open, and they had seen how Howley had handled the thing. Well—*almost* how. Thursby had the lens opening pointed at the wheel, but his thumb and fingers weren't touching the silver plates properly.

"Spin it again," he said.

Everyone's eyes were on the ball as it whirled, so I had time to get my own copy of Howley's gadget out and set it at Thirteen. I hoped the thing would work for me. I concentrated on Thirteen, making sure my thumb and fingers were placed right.

Evidently they were. The ball fell into Thirteen, Black, Odd, and Low.

A huge grin spread over Thursby's face, but he was man enough not to turn and grin at me. "Try it again," he said.

Thirteen, Black, Odd, and Low.

"I wonder how the thing works?" said Thursby, looking at the gadget in a sort of pleased awe.

"You'd better be able to prove that it *does* work, Thursby," I said, trying to put irritation into my voice.

This time, he did grin at me. "Oh, I think we can prove that, all right." He turned back to the technician. "Spin it once more, Sam, and show

the defense counsel, here, how it works."

The technician did as he was told. "Thirteen, Black, Odd, and Low," he chanted, grinning.

"Let's try another number," Thursby said. He turned the dial to One. And this time, when he pointed it, his fingers were touching the plates in the right places.

"Just a minute," I said. "Let me spin that thing."

"Be my guest, counselor," said Thursby.

I spun the wheel and scooted the ball along the rim. It dropped into a slot. One, Red, Odd, and Low. I looked as disappointed and apprehensive as I could.

"Co-incidence," I said. "Nothing more. You haven't proved anything."

Thursby's grin widened. "Of course I haven't," he said with a soothing, patronizing tone. "But I don't have to prove anything until I get to court."

Then he looked at the technicians and jerked his head toward the door. "Let's go, boys. Maybe the counselor wants to look over the table for himself. Maybe he thinks we've got it rigged."

There was a chorus of guffaws as they walked out. I just stood there, scowling, trying to keep from laughing even harder than they were.

Jason Howley sat next to me at the defense table, just inside the low partition that divided the court from the public. There weren't many people in the auditorium itself; listening to some poor dope get himself sentenced for cheating at gambling is considered pretty dull entertainment in the State of Nevada.

Thursby had managed to push the indictment through the grand jury in a hurry, but, as he sat across the room from me at the prosecution table, I thought I could detect a false note in the assumed look of confidence that he was trying to wear.

Howley tapped me on the shoulder. I turned around, and he whispered: "How much longer?"

I tapped my wrist watch. "Couple minutes. Judge Lapworth is one of those precisionists. Never a moment late or early. Getting jumpy?"

He shook his head gently and smiled. "No. You've handled this even better than I'd have imagined. You thought of things I didn't even know existed. I'm no lawyer; I can see that."

I returned the smile. "And I don't invent gimmicks, either. So what?"

His eyes looked at me from behind the distorting negative lenses. "I've been wondering, counselor—why are you so interested in this? I mean, I offered you a pretty good fee, and all that, but it seems to me you're taking an unusual interest in the case."

I grinned at him. "Mr. Howley, my profession is Law—with a capital L. The study of the Law isn't like the study of physics or whatever; these are manmade laws—commands, not descriptions. They don't

necessarily have anything to do with facts at all. Take the word 'insanity,' for instance; the word isn't even used by head-shrinkers any more because it's a legal definition that has nothing whatever to do with the condition of the human mind.

"Now, any such set of laws as that can't possibly be self-consistent and still have some use on an action level. A lawyer's job is to find the little inconsistencies in the structure, the places where the pieces have been jammed together in an effort to make them look like a structured whole. To find, in other words, the loopholes and use them.

"And when I find a loophole, I like to wring everything I can out of it. I'm enjoying this."

Howley nodded. "I see. But what if something—"

I held up my hand to silence him, because the door to the judges' chambers opened at that moment, and Judge Lapworth came in as the baliff announced him. We all stood up while the baliff intoned his "Oyez, oyez."

Thursby made a short preliminary speech to the jury, and I requested and was granted permission to hold my own opening statement until the defense was ready to present its case.

Thursby was looking worried, although it took a trained eye to see it. I was pretty sure I knew why. He had been pushed too hard and had gone too fast. He'd managed to slide through the grand jury too easily, and I had managed to get the trial date set for a week later. Thursby's case was far from being as tight as he wanted it.

I just sat still while the prosecution brought forth its witnesses and evidence. The croupier, the deputies, several employees of the Golden Casino, and a couple of patrons all told their stories. I waived cross-examination in every case, which made Thursby even edgier than he had been.

When he called in the head of the technicians who had inspected the table at the casino, I made no objection to his testimony, but I made my first cross-examination.

"Mr. Thompson, you have stated your qualifications as an expert on the various devices which have been used to illegally influence the operation of gambling devices in this state."

Thursby said: "Oh, if the Court please, I should like to remind counsel for the defense that he has already accepted the qualifications of the witness."

"I am not attempting to impugn the qualifications of the witness," I snapped.

Judge Lapworth frowned at Thursby. "Are you making an objection, Mr. District Attorney?"

Thursby pursed his lips, said, "No, Your Honor," and sat down.

"Proceed with the cross-examination," said the judge.

"Mr. Thompson," I said, "you have testified that you examined the table at the Golden Casino for such

devices and found none. Is that right?"

"That's right," he said positively.

"Have you seen the device labeled People's Exhibit A, which was found by the officers on the person of the defendant?"

"Well . . . yes. I have."

"Have you examined this device?"

Thursby was on his feet. "Objection, Your Honor! This material was not brought out in direct examination!"

"Sustained," said Judge Lapworth.

"Very well, Your Honor," I said. Then I turned back to Thompson. "As an expert in this field, Mr. Thompson, you have examined many different devices for cheating gambling equipment, haven't you?"

"Yes, I have."

"How many, would you say?"

"Oh . . . several hundred."

"Several hundred different *types?*"

"No. Several hundred individual devices. Most of them are just variations of two or three basic types."

"And you are familiar with the function of these basic types and their variations?"

"I am."

"You know exactly how all of them work, then?"

He saw where I was heading. "Most of them," he hedged.

Thursby saw where I was heading, too, and was sweating. I'd managed to get around his objection.

"Have you ever examined any which you could not understand?"

"I . . . I don't quite know what you mean."

"Have you ever," I said firmly, "come across a device used in cheating which you could not comprehend or explain the operation of?"

Thursby stood up. "Same objection as before, Your Honor."

"Your Honor," I said, "I am merely trying to find the limitations of the witness' knowledge; I am not trying to refute his acknowledged ability."

"Overruled," said Judge Lapworth. "The witness will answer the question."

I repeated the question.

"Yes," Thompson said in a low voice.

"More than once?"

"Only once."

"Only once. You did find one device which didn't operate in any fashion you can explain. Is that right?"

"That's right."

"Can you tell me what this device was?"

Thompson took a deep breath. "It was People's Exhibit A—the device taken from the defendant at the time of his arrest."

There was a buzz in the courtroom.

"No more questions," I said, turning away. Then, before Thompson could leave the stand, I turned back to him. "Oh, just one moment, Mr. Thompson. Did you examine this device carefully? Did you take it apart?"

"I opened it and looked at it."

"You just looked at it? You didn't subject it to any tests?"

Thompson took a deep breath. "No."

"Why not?"

"There wasn't anything inside it to test."

This time, there was more than just a buzz around the courtroom. Judge Lapworth rapped for order.

When the room was quiet, I said: "The box was empty, then?"

"Well, no. Not exactly empty. It had some stuff in it."

I turned to the judge. "If the Court please, I would like to have the so-called device, Exhibit A, opened so that the members of the jury may see for themselves what it contains."

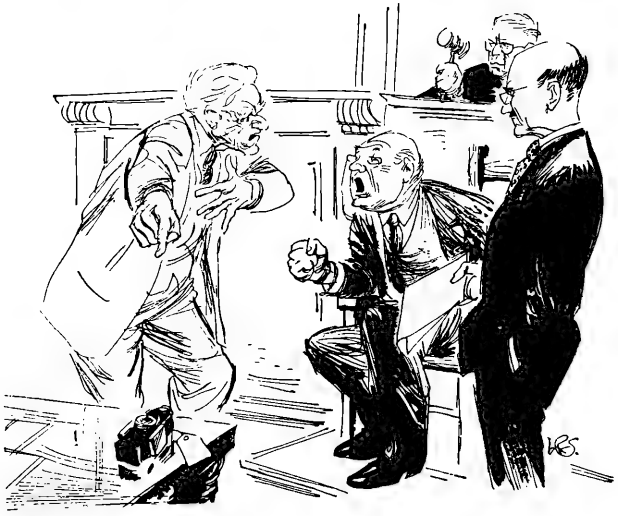
Judge Lapworth said: "The Court would like very much to see the internal workings of this device, too. Bailiff, if you will, please."

The bailiff handed him the gadget from the exhibit table.

"How does it open?" asked the judge. He turned to Thompson. "Will the witness please open the box?"

Reluctantly, Thompson thumbed the catch and slid off the top.

The judge took it from him, looked inside, and stared for a long moment.



I had already seen the insides. It was painted white, and there were inked lines running all over the inside, and various pictures—a ball, a pair of dice, a roulette wheel—and some other symbols that I didn't pretend to understand.

Otherwise, the box was empty.

After a moment, Judge Lapworth looked up from the box and stared at Thursby. Then he looked at Thompson. "Just what tests *did* you perform on this . . . this thing, Mr. Thompson?"

"Well, Your Honor," Thompson said, visibly nervous, "I checked it for all kinds of radiation and magnetism. There isn't anything like that coming from it. But," he added lamely, "there wasn't much else to test. Not without damaging the box."

"I see." His honor glared at Thursby, but didn't say anything to him. He simply ordered the box to be shown to the jury.

Thursby was grimly holding his ground, waiting.

"Have you any more questions, counselor?" the judge asked.

"No, Your Honor, I have not."

"Witness may step down," said his honor to Thompson.

Thursby stood up. "If the Court please, I would like to stage a small demonstration for the members of the jury."

The Court gave permission, and a roulette wheel was hauled in on a small table.

I watched with interest and without objection while Thursby demonstrated the use of the gadget and then asked each of the jurors in turn to try it. It was a long way from being a successful demonstration. Some of the jurors didn't hold the thing right, and some of those that did just didn't have the mental ability required to use it. But that didn't bother Thursby.

"Your Honor, and Gentlemen of the Jury," he said, "you are all aware that a device constructed for the purpose of cheating at any gambling game is not necessarily one hundred per cent infallible. It doesn't have to be. All it has to do is turn the odds in favor of the user.

"You are all familiar with loaded dice, I'm sure. And you know that loading dice for one set of numbers merely increases the probability that those numbers will come up; it does not guarantee that they will come up every time.

"It is the same with marked cards. Marking the backs of a deck of cards doesn't mean that you will invariably get a better hand than your opponent; it doesn't even mean that you will win every hand.

"The device taken from the defendant at the Golden Casino does not, as you have seen, work every time. But, as you have also seen, it certainly *does* shift the odds by a considerable percentage. And that, I submit, is illegal under the laws of this state."

He went on, building on that theme for a while, then he turned the trial over to the defense.

"Call Dr. Pettigrew to the stand," I said.

I heard Thursby's gasp, but I ignored it.

A chunky, balding man with a moon face and an irritated expression came up to be sworn in. He was irritated with me for having subpoenaed him, and he showed it. I hoped he wouldn't turn out to be hostile.

"You are Dr. Herbert Pettigrew?" I asked.

"That is correct."

"State your residence, please."

"3109 La Jolla Boulevard, Los Angeles, California."

"You are called 'Doctor' Pettigrew, I believe. Would you tell the Court what right you have to that title?"

He looked a little miffed, but he said: "It is a scholarly title. A Doctorate of Philosophy in physics from Massachusetts Institute of Technology."

"I see. Would you mind telling the Court what other academic degrees you have?"

He reeled off a list of them, all impressive.

"Thank you, doctor," I said. "Now, what is your present occupation?"

"I am a Professor of Physics, at the University of California in Los Angeles."

I went on questioning him to establish his ability in his field, and by the time I was finished, the jury was pretty well impressed with his status in the scientific brotherhood. And not once did Thursby object.

Then I said, "Dr. Pettigrew, I believe you came to this city on a professional matter?"

"Yes, I did." He didn't hesitate to answer, so I figured I hadn't got his goat too much.

"And what was the nature of that matter?"

"I was asked to come here by Mr. Harold Thursby, the District Attorney, to perform some scientific tests on the . . . er . . . device . . . the device known as People's Exhibit A."

"Did you perform these tests?"

"I did."

"At the request of District Attorney Thursby, is that right?"

"That is correct."

"May I ask why Mr. Thursby did not call you as a witness for the prosecution?"

Thursby, as I had expected, was on his feet. "Objection! The question calls for a conclusion of the witness!"

"Sustained," said Judge Lapworth.

"Dr. Pettigrew," I said, "what were your findings in reference to Exhibit A?"

He shrugged. "The thing is a plastic box with a dial set in one side, a plastic lens in one end, and a couple of strips of silver along two other sides. Inside, there are a lot of markings in black ink on white paint." He gestured toward the exhibit table. "Just what you've seen; that's all there is to it."

"What sort of tests did you perform to determine this, Dr. Pettigrew?" I asked.

He took a long time answering that one. He had X-rayed the thing thoroughly, tested it with apparatus I'd never heard of, taken scrapings from all over it for microchemical analysis, and even tried it himself on a roulette wheel. He hadn't been able to make it work.

"And what is your conclusion from these findings?" I asked.

Again he shrugged. "The thing is just a box, that's all. It has no special properties."

"Would you say that it could be responsible for the phenomena we have just seen? By that, I mean the peculiar action of the roulette wheel, demonstrated here by the prosecution."

"Definitely not," he stated flatly. "The box could not possibly have any effect on either the wheel or the ball."

"I see. Thank you, doctor; that's all. Cross-examine."

Thursby walked over to the witness stand with a belligerent scowl on his face. "Dr. Pettigrew, you say that the box couldn't possibly have had any effect on the wheel. And yet, we have demonstrated that there *is* an effect. Don't you believe the testimony of your own senses?"

"Certainly I do!" snapped Pettigrew.

"Then how do you account for the behavior of the roulette wheel as you have just seen it demonstrated in this court?"

I suppressed a grin. Thursby was so mad that he was having trouble expressing himself clearly.

"In several ways!" Pettigrew said sharply. "In the first place, that wheel could be rigged."

Thursby purpled. "Now, just a minute! I—"

I started to object, but Judge Lapworth beat me to it.

"Are you objecting to the answer, Mr. District Attorney?"

"The witness is insinuating that I falsified evidence!"

"I am not!" said Pettigrew, visibly angry. "You asked me how I could account for its behavior, and I told you one way! There are others!"

"The wheel will be examined," said Judge Lapworth darkly. "Tell us the other ways, Dr. Pettigrew."

"Pure chance," said Pettigrew. "Pure chance, Your Honor. I'm sure that everyone in this courtroom has seen runs of luck on a roulette wheel. According to the laws of probability, such runs must inevitably happen. Frankly, I believe that just such a run has occurred here. I do not think for a minute that Mr. Thursby or anyone else rigged that wheel."

"I see; thank you, Dr. Pettigrew," said the judge. "Any further questions, Mr. District Attorney?"

"No further questions," Thursby said, trying to hide his anger.

"Call your next witness," said the judge, looking at me.

"I call Mr. Jason Howley to the stand."

Howley sat down and was sworn

in. I went through the preliminaries, then asked: "Mr. Howley, you have seen People's Exhibit A?"

"I have."

"To whom does it belong?"

"It is mine. It was taken from me by—"

"Just answer the question, please," I admonished him. He knew his script, but he was jumping the gun. "The device is yours, then?"

"That's right."

"Under what circumstances did this device come into the hands of the police?"

He told what had happened on the night of the big take at the Golden Casino.

"Would you explain to us just what this device is?" I asked when he had finished.

"Certainly," he said. "It's a good luck charm."

I could hear the muffled reaction in the courtroom.

"A good luck charm. I see. Then it has no effect on the wheel at all?"

"Oh, I wouldn't say that," Howley said disarmingly. He smiled and looked at the jury. "It certainly has *some* effect. It's the only good luck charm I ever had that worked."

The jury was grinning right back at him. They were all gamblers at heart, and I never knew a gambler yet who didn't have some sort of good luck charm or superstition when it came to gambling. We had them all in the palms of our hands.

"What I mean is, does it have any *physical* effect on the wheel?"

Howley looked puzzled. "Well, I don't know about that. That's not my field. You better ask Dr. Pettigrew."

There was a smothered laugh somewhere in the courtroom.

"Just how do you operate this good luck charm, Mr. Howley?" I asked.

"Why, you just hold it so that your thumb touches one strip of silver and your fingers touch the other, then you set the dial to whatever number you want to come up and wish."

"*Wish?* Just *wish,* Mr. Howley?"

"Just wish. That's all. What else can you do with a good luck charm?"

This time, the judge had to pound for order to stop the laughing.

I turned Howley over to Thursby.

The D.A. hammered at him for half an hour trying to get something out of Howley, but he didn't get anywhere useful. Howley admitted that he'd come to Nevada to play the wheels; what was wrong with that? He admitted that he'd come just to try out his good luck charm—and what was wrong with that? He even admitted that it worked for him every time—

And what was wrong, pray, with *that?*

Thursby knew he was licked. He'd known it for a long time. His summation to the jury showed it. The expressions on the faces of the jury as they listened showed it.

They brought in a verdict of Not Guilty.

When I got back to my office, I picked up the phone and called the

Golden Casino. I asked for George Brockey, the manager. When I got him on the phone and identified myself, he said, "Oh. It's you." His voice didn't sound friendly.

"It's me," I said.

"I suppose you're going to slap a suit for false arrest on the Casino now, eh, counselor?"

"Not a bit of it, George," I said. "The thought occurred to me, but I think we can come to terms."

"Yeah?"

"Nothing to it, George. You give us the three hundred grand and we don't do a thing."

"Yeah?" He didn't get it. He had to fork over the money anyway, according to the court order, so what was the deal?

"If you want to go a little further, I'll tell you what we'll do. We'll give you one of our little good luck charms, if you'll promise to call your boys off Howley."

"Nobody's on Howley," he said. "You ought to know better than that. In this state, if we get whipped in court, we play it square. Did you think we were going to get rough?"

"No. But you kind of figured on lifting that gadget as soon as he gets it back from the D.A., didn't you? I saw your boys waiting at his hotel. I'm just telling you that you don't have to do that. We'll give you the gadget. There are plenty more where that came from."

"I see," Brockey said after a long pause. "O.K., counselor. It's a deal."

"Fine. We'll pick up the money later this evening, if that's O.K."

"Sure, counselor. Anytime. Anytime at all." He hung up.

I grinned at Howley, who was sitting across the desk from me. "Well, that winds it up."

"I don't get it," Howley said. "Why'd you call up Brockey? What was the purpose of that 'deal'?"

"No deal," I told him. "I was just warning him that killing you and taking the gadget wouldn't do any good, that we've covered you. He won't bother having anything done to you if he knows that the secret of the gadget is out already."

Howley's eyes widened behind those spectacles of his. "You mean they'd kill me? I thought Nevada gamblers were honest."

"Oh, they are, they are. But this is a threat to their whole industry. It's more than that, it may destroy them. Some of them might kill to keep that from happening. But you don't have to worry now."

"Thanks. Tell me; do you think we've succeeded?"

"In what you set out to do? Certainly. When we mail out those gadgets to people all over the state, the place will be in an uproar. With all the publicity this case is getting, it'll *have* to work. You now have a court decision on your side, a decision which says that a psionic device can be legally used to influence gambling games.

"Why, man, they'll *have* to start investigating! You'll have every politico in the State of Nevada insisting that scientists work on that thing. To

say nothing of what the syndicate will do."

"All I wanted to do," said Howley, "was force people to take notice of psionics. I guess I've done that."

"You certainly have, brother. I wonder what it will come to?"

"I wonder, myself, sometimes," Howley said.

That was three and a half years ago. Neither Howley nor I are wondering now. According to the front page of today's *Times*, the first spaceship, with a crew of eighty aboard, reached Mars this morning. And, on page two, there's a small article headlined: ROCKET OBSOLETE, SAY SCIENTISTS.

It sure is.

THE END

THE ANALYTICAL LABORATORY

Every so often we get complaints about the use of novels in serial form. I know—I don't like having to wait for installments either. (One advantage of being an editor; I don't have to!) But . . . there's the unfortunate fact that type-metal is decidedly inelastic, and we can't get novels in one issue, plus the other, and important, fact that you readers like long stories. As witness this month's results:

PLACE	STORY	AUTHOR	POINTS
1.	Dorsai! (Pt. II)	Gordon R. Dickson	1.81
2.	Transfusion	Chad Oliver	2.14
3.	Cat and Mouse	Ralph Williams	2.35
4.	All Day September	Roger Kuykendall	4.10
5.	Unborn Tomorrow	Mack Reynolds	4.46

Please—don't give me the "yes, I mean no, but certainly you should, but I don't like it, but . . ." effect. If you consistently vote longer stories first place . . . what should I do? Run short ones just to spite you . . . ?

THE EDITOR.

. . . ON . . .

Illustrated by Freas

Sometimes a story is best told by omission—!

.HANDLING THE DATA

BY M. I. MAYFIELD

September 16, 1957
Dr. Robert Von Engen, Editor
Journal of the National Academy of Sciences,
Constitution Avenue, N. W.,
Washington, D. C.

Dear Sir:

I am taking the liberty of writing you this letter since I read your published volume, "Logical Control: The Computer vs. Brain" (Silliman Memorial Lecture Series, 1957), with the hope that you can perhaps offer me some advice and also publish this letter in the editorial section. Your mathematical viewpoint on the analysis between computing machines and the living human brain, especially the conclusion that the brain operates in part digitally and in part analogically, using its own statistical language involving selection, conditional transfer orders, branching, and control sequence points, et cetera, makes me feel that only you can offer me some information with logical *arithmetic depth.*

The questions raised in this letter are designed principally to reach the embryonic and juvenile scientists . . . the *scientists-elect,* so to speak. (I think the "mature scientists" are irretrievably lost.) For many reasons, some of which will be explained in the following paragraphs, I think that it is of the greatest importance that some stimulatable audience be

reached. As yet, the beginners have no rigid scientific biases and thus may have sufficient curiosity and flexibility about the world in which they live to approach experimentation with a mind devoid of "the hierarchy of memory registers which have programmed in erroneous data."

What I have to say will not surprise nor shock *you,* or those who are at present engaged in scientific investigation. In fact, I have read many science-fiction stories that deal with the same problem. Perhaps that is the only way that it can be approached, through the medium of a story? Yet why not present it for what it may be? Let me tell it my own way, and then, please, let me have your *coldly logical* opinion.

As to my background, I am a graduate student in the Zoology Department of a midwestern university working toward a Master's degree, or actually a doctorate—we can bypass the M.S. if we choose—in the field of Cellular Physiology. My sponsor is an internationally known man in the field. The area of research that I have selected is concerned with the effects of physical and chemical agents on the synthesis of nucleic acids of the cell. Obviously, this is a big field, and I hope to select from among the different agents, one or two that will give "positive results." I have been doing active research for about half a year testing the different agents. As for the *fundamental* questions raised, I am positive that it would make *no* difference in what field of science I were to work.

By now I have had enough course work to realize that when performing any assigned laboratory exercise —they should not be called experiments—even of a cook-book type, little or even major discrepancies arise, and *always on the initial trials,* no matter how carefully one works! As you are probably aware, the teaching assistant in charge of the lab or the instructor, generally runs through the exercise before the class does in order to get the "bugs" out of it—I am deliberately generalizing, since the above holds for all of the laboratory sciences—so when the student gets confusing or rather contradictory results, the instructor can deftly point out the error in the set-up or calculations, or *what have you.* He may *even* indicate what results may be expected. *The last is critical.* Similarly other students in the laboratory usually have friends who have had the course before and know what results are expected—*this technique is frowned upon.* Or one may consult textbooks and published papers. (This, by the way, is known as *library research,* and is generally conceded to be indicative of the superior student, especially if he points out the fact that he is *so interested* that he just had to delve into the literature.) By any technique, *the expected results are always obtained. Always. And by everyone.* The initial confusions—that some *honest* students perpetuate—are easily

brushed aside as errors due to inexperience, sloppiness, lack of initiative, stupidity of congenital sort, et cetera, et cetera.

Since being a teaching fellow, even simple cook-book experiments don't seem as cook-bookish. Some pretty weird things have happened when I tried out an exercise prior to the class. Fortunately, I was taught to keep data—in duplicate: indelible purple Hexostick original and carbon copy. These, *vide infra,* are a few of such happenings.

Elementary General Physiology Laboratory:

1. Initial maximal vagal stimulation:
   Expected results: inhibition of heart beat.
   Obtained results: one series of inincreased heart beats. (Possible explanation: I missed the vagus nerve) ????
2. *Frog nerve-muscle preparation:*
   Expected results: a single muscle twitch.
   Obtained results: a beautiful *nerve* twitch.
   (Explanation: Eyesight? How can *nerves* twitch?) ??
3. *Hypotonic hemolysis:*
   Expected results: red blood cell destruction.
   Obtained results: crenation.
   (Explanation: switched salt solutions *unconsciously*) ?????
4. *Curarized muscle preparation:*
   Expected results: a synaptic block with no response of nerve when stimulated.
   Observed results: a typical strychnine response, violent *tetanus,* et cetera.
   (Explanation: again, I switched bottles) ????
5. I shall avoid the obvious mention of mishaps with mechanical or electrical pieces of equipment. I assure you there were similar deviations in initial attempts.

Since I realize that you are preparing a paper on *Memory Registers: Stimulation Criteria,* for the VIth Annual International Meeting of the Society of Theoretical Biomathematicians in London, and are short of time, I shall avoid going into the same kind of detail as the above for other Biology Labs, and get into the real heart of the thing . . . the research problem. (After all that is what both of us are interested in.) By the way, please send me a reprint of the paper when it comes out.

I guess I am really hepped up on this, because I've just got to point out for emphasis other incidences usually of a type that involved missing a whole organ in dissections or a tissue structure in histology only on the *first* study, and then re-reading the assignment—after knowing what to look for—and *subsequently finding it exactly where it is said to be.* (Ever hunt for an unknown quality—or quantity?) *So it was there all the time,* sloppy technique? Or is this branching at a control point? *cf.*LC: C. vs. B. p. 251.

To get back to my thesis research,

the pieces of equipment that I have been using in the research are fairly standard in physiological research: a Beckman spectrophotometer, a Coleman photometer, a van Slyke amino nitrogen apparatus, a Warburg respirometer, pH meters, Kjeldahls, Thunbergs, et cetera. Mostly, I'm in the process of getting used to them. Also there is a high voltage X-ray generator, U. V. source and other equipment for irradiation purposes. We also have an A. E. C. license so that we can get at least microcurie amounts of the usual isotopes for radioautographic work.

Now the literature in my area is pretty controversial. (You can appreciate *that,* especially since Bergbottom at the Kaiser Wilhelm Institute bombarded you with criticisms of your theories.) Different and actually contradictory results have been obtained for the same substance in the same organism, *e. g.* alkaline phosphatase in the frog liver cell (Monnenblick, '55, Tripp, '56, and Stone, '57). To give an example, when I start a run for respiration effects using a Warburg I don't know what results to expect. Whenever this has been the case, my results have been confusing . . . to say the least.

On nitrogen-mustard treated cells, in some instances the controls respired significantly *more*—even with a statistical analysis of variance—in some instances the *experimentals* respired significantly more; and in other cases the respiration for both was *exactly* the same—even *closer* than the expected deviations that should be found in any random population. One run, the blank run, *containing no cells* . . . and grease-free . . . consumed the greatest amount of oxygen. To cut this letter short, the same inconstancies apply to other trials that I have made. Whenever I didn't know what to expect, and particularly where the literature was controversial, my results have been completely haywire.

Needless to say, I was not happy with this so I discussed it with other graduate students. They have all encountered the *same thing!* But most professors won't admit this to be true and merely tell me that my technique is lousy. If anything, I am an overly careful worker. Why is it when I *know* what results are expected, I get comparable results even on the *first* trial?

Remember, *I obtained the expected results* when the literature wasn't confused or when my sponsor—a most important man in my life—gave me a clue as to what kind of results to expect. *Only then.*

Now this is the heart of the matter . . . The obvious explanation is the lack of experience. But, and this is what haunts me . . . *what if those so-called contradictory results are meaningful?* What if they were executed with care—*and they were*—and are not the results of sloppiness or inexperience? *What if a nerve can twitch?*

Very respectfully yours,
Jonathan Wells

May 3, 1958

Dr. Robert Von Engen,
Editor, Journal of the National
Academy of Sciences,
Constitution Avenue,
Washington, D. C.

Dear Dr. Von Engen:

I would like to thank you for your encouraging letter and advice. I agree completely with your statement that science has a long way to go before we can explain the various inconsistencies that crop up in research. But I certainly can't see how the letter is far too "unsophisticated" for inclusion in the *Letters to the Editor* portion of your journal. While your letter should have calmed me, I feel even more strongly now after a year of research about the matter than I did before. I have deliberately postponed answering your letter until I had more *facts*.

I now find that I have accumulated—as you suggested—three distinctly conflicting groups of data on nucleic acid synthesis of frog liver cells:

1. There is a conversion of ribonucleic acid to desoxyribonucleic acid.

2. There is a conversion of desoxyribonucleic acid to ribonucleic acid.

3. The synthesis of both types of nucleic acid are independent of each other. (In addition, I have some data . . . that I don't want to think about too much . . . that shows that there is absolutely no nucleic acid in the liver cell.) Thus, these data all accumulated by experimental work, *support all three hypotheses.* Moreover, the literature supports *all three hypotheses.* I intend to go to the Woods Hole, Massachusetts Marine Lab this summer with my sponsor and get some new ideas there, especially since Professor Gould M. Rice from the University of London will be there presenting a seminar series on his work in nucleic acid synthesis in *Oryzias.*

The point is not that there is a conflict in the data, but that the data conflict because there is a conflict in my mind and in the literature. *Don't you see it?* As you said on page 20 of "Logical Control: Computer vs. Brain": "the order-system—this means the problem to be solved, the interaction of the user—is communicated to the machine by 'loading' it into the memory."

Sincerely yours,
Jonathan

August 31, 1958

Dr. Robert Von Engen,
Journal of the National Academy of
Sciences,
Constitution Avenue,
Washington, D. C.

Dear Dr. Bob:

Again, many thanks for your letter—and encouragement. I especially treasure the inscribed copy of "Logical Control: Computer vs. Brain," and the current reprint. I am sorry that I didn't get an opportunity to get down to Washington en route to Woods Hole and talk over the

whole thing over a bottle of beer, *dark beer.* From what I hear of the demands on a first-rate mathematician's time these days, you should be grateful that I didn't get to see you, because I would have monopolized *all* your time. I appreciate your generosity in extending the invitation as a rain check to me.

Your mention of the Duke School of "psychology"—my quotes—leaves me cold. It's too obvious and puts the cart before the horse. The important point that I was trying to make dealt not with the "possible parapsychological" manipulation of equipment or the materials *a la* telekinesis to produce the desired results, *but that our Science may not be studying natural phenomena and trying to interpret them at all.* The point, to get it down in black and white, is that our "Science"—yes, quotes—may be *inventing* the reality that it is supposedly studying. *Inventing the atoms, molecules, cells, nuclei, et cetera . . . and then describing them, and in the description giving them reality.*

While I was at Woods Hole I had some really good bull sessions about this very thing. I realize now that I may have been falling into the trap of solipsism, "who watches the quad," et cetera, type of thing. Incidentally, my research is finally beginning to fall into shape. My sponsor and I had some pretty good sessions about it, and some of the screwy results I wrote you begin to make sense. I had the good luck to talk to an outstanding man in the field of nucleic acid synthesis and he was quite enthusiastic about the caliber of our work. He feels quite strongly—but has no real evidence—that the synthesis of both types of nucleic acid are independent of each other and has pointed out some significant references that I did not know about. I'm anxious to buckle down and really lick this nucleic acid problem . . . in time for a June degree.

Cordially,
Jonathan

P.S.

Please send me a reprint of your lecture on "Memory Banks-Transistorized Neurones." The lecture was ingenious, but there are some biological phenomena with which I don't agree. Remember, I'm the biologist. Honestly, Doc, don't you think—*entre nous*—that your idea that a living organism, can be compared with automata in picking up informational items and processing them simultaneously in parallel, rather than in series, is naif?

J.

October 28, 1958

Dr. R. Von Engen,
Journal of the National Academy of Sciences,
Washington, D. C.

Dear Dr. Von Engen:

I apologize for not answering your letter sooner. I assume you were pulling my leg when you suggested that I make a science-fiction story out of "the confused ideas of a beginning graduate student." You might

give *your* idea of a "possible science-fiction story" to one of your acolytes that has some small experience in the field of writing—not science. I am afraid that your other suggestions are not germane to the problem of nucleic acid synthesis and metabolism, a problem that has been occupying *all* my time. In fact, I've been doing with three to four hours of sleep these days. With the kind of concentration that I can offer the problem, there is no question that the data are falling into line, and our research is going rather well. We will show, I hope, fairly conclusively that there is little or no interconversion between the two types of nucleic acid synthesis in the cell.

Despite your ingenious mathematical approaches for stimulation criteria, in biological research—a very abstruse field—even your multiplex machines with elaborate means of intercommunication are not sophisticated enough—or ever will be—to cope with the complexities inherent in the numerous interacting biosyntheses on the subcellular ultratopographical level of protoplasm.

Sincerely yours,
Jonathan Wells

November 8, 1958

The Editor,
Journal of the National Academy of Sciences,
Washington, D. C.

My dear Professor Von Engen:

From the tenor of your last letter it is quite evident that there has been a radical change in your originally sound and inspired ideas, and which clearly indicates to me that a discussion and exchange of basic concept would be fruitless. I'm rather hurt that you question my integrity with the statement about the "slick, calculating, career-minded cult of Ph. Deism." Moreover, I would appreciate, if possible, the return of my previous correspondence.

I don't feel that I am totally inept, for I have been awarded a predoctoral fellowship that will support me during the remainder of graduate school. In addition, I am being seriously considered for a faculty position at an outstanding Eastern University upon completion of my thesis. Should you be interested, we now have an article in press on the Journal of Cellular Physiology entitled: "Nucleic acid synthesis in the frog liver cell: A definitive study." We have found substantial evidence which demonstrates that there is no interconversion of the two types of nucleic acid.

I cannot help but comment about your recent paper in *Scientia*—I do not believe that it is at all possible to devise computers which can handle the species of data which we obtain. Your data being less complex, of course, may fit.

Naturally, I have your confidence in the entire matter.

Yours very truly,
J. Wellington Wells

THE END

THE REFERENCE LIBRARY

BY P. SCHUYLER MILLER

THE NEXT TIME

IT WOULD take a phenomenal memory or a phenomenal filing system to say how many times science - fiction writers have used the theme of another global war. Old-timers may remember that the "Buck Rogers" series got its start in two such stories, in the old *Amazing Stories*. Other oldsters will recall Floyd Gibbons' "Red Napoleon," serialized with much to-do in *Liberty*, long before Hitler. Closer to home, there have been L. Ron Hubbard's memorable "Final Blackout," Bob Tucker's "Long Loud Silence" and C. M. Kornbluth's "Not This August"—all "inside" science fiction—and books like Nevil Shute's "On the Beach" or Philip Wylie's

polemic on civil defense, "Tomorrow," done by "outsiders."

As 1959 gets under way, three of the outsiders have done it again, and there is undoubtedly more to come. Coincidentally, the three books—two of them paperbacks—complement each other very well.

"Red Alert," by Peter Bryant, (Ace Books No. D-350; 191 pp.; 35 cents) is the most sensational of the three, since it describes the first few hours of a war we start. To be more precise, it is a near-war started by one man, a general at the Strategic Air Command's base in Sonora, Texas. His physician has given him only a short time to live; the Air Force is about to move him to an innocuous desk job in the Pentagon; and he is a firm believer in the doctrine that the United States can win a war with Russia only by striking first and without warning. So, when the bombers of his 843rd Wing reach the points at which they would ordinarily turn back, they get the command that sends them on, carrying their H-bombs to targets in Russia.

The story is very well handled, carried along with the parallel stories of what happens in General Quinten's walled-in post, in one of the bombers, and in the War Room of the Pentagon, as the crew of the *Alabama Angel* try to reach their target, as the renegade general tries to keep his bombers going long enough to reach their targets, and as the President and the Joint Chiefs of Staff try to find a way out of the situation. What solution is found is something the author alone should have the privilege of telling you. He has pulled a sneak attack of his own with his "Red Alert."

The other two books tell stories of what happens to small segments of the population in the hours and days after Russia has attacked and destroyed our larger cities. They are Richard Foster's "The Rest Must Die" (Gold Medal Books No. S-853; 176 pp.; 35 cents) and "Alas, Babylon," by Pat Frank, author of the memorable "Mr. Adam" (J. B. Lippincott Co., Philadelphia; 254 pp.; $3.50). Though neither book carries the after-impact of those by Hubbard, Kornbluth and Tucker, both are well beyond the implausible "good-little - town / bad - little-town" pamphleteering of Wylie's novel.

Foster's book is more exciting, more conventional, and less of a novel in that its characters never quite come to life as Frank's do. He is telling the story of a group of people trapped in the subway and concourse network under the streets of New York, after atomic bombing has flattened the city over their heads. His hero, Bob Randall, is an advertising executive who happens to have done a public service campaign that has made him familiar with underground New York—hence a natural leader in finding what resources can be discovered there, and in keeping several thousand survivors alive in the labyrinth under and around Penn Station until a way of escape is found.

This is a "Grand Hotel" situation made to order, and the author draws

together men and women of greatly different types and characters and puts them through his mill, grinding down the inflated, building up the meek but worthy in rather traditional fashion. The picture of stunned disbelief, followed by delayed hysteria and ugly opportunism, strikes me as more realistic than the quiet drifting off of the much-touted "On the Beach." And if the pat variety of the author's personnel seems implausible, it must be remembered that this is precisely what the contents of a New York subway will be at any moment, and especially at a rush period: a varied cross-section of humanity at its most implausible. If they act meanly and nobly, viciously and compassionately, with weakness and strength, this is how people have acted, do act, and will act under similar circumstances.

Even so, Bob Randall and his refugees under shattered New York are far less real and plausible as people than the far smaller group of survivors whom Pat Frank brings together in semirural central Florida, after that state's cities and air bases have been bombed. Their problem is less immediate: they are not trapped in the darkness; they have a certain ability to live off the land and by their own resources; the radiation problem is not immediate; and the author has chosen to spare them most of the rush of city refugees that might have made open civil war one of the early elements of his plot. The situation in "The Rest Must Die" is a deliberately artificial one, that must be handled by rather artificial means. The situation in "Alas, Babylon" comes closer to what must happen to people in large areas of this country in the event of a nuclear war, even though Foster's story is closer to the fate of the greatest number.

Randy Bragg, hero of the book, is living lethargically off his income and his citrus groves, near the small Florida town of Fort Repose, when a telegram from his brother tells him that war is imminent and that his sister-in-law and her children will soon reach him. He has a little time to prepare, and no real background for doing so, before the bombs begin to fall. Then he and the group of people, colored and white, who live around him, fight their way through to survival in a new pattern—a United States without cities.

There are interesting contrasts between the two books. Foster's emphasizes the richness of resources in the under-city, which makes survival there possible for weeks. Frank's on the other hand, stresses the immediate breakdown of things we take for granted — communications, credit, money, most of the industrially produced drugs on which we rely. In both books there is eventually pitched battle, but in the one case it is a battle of the lawful and the lawless over a fixed treasury of resources, while in the other members of an orderly, reasonably well adjusted community are cutting lawlessness out of their society, not battling it on even terms. The kind of temporary society imposed by force and logic on the refu-

gees in the New York subways could never become the pattern of society for a postwar world, but the people of "Alas, Babylon" evolve such a society as the book progresses, and we have confidence that it can and will survive.

In the terms of the discussion of science fiction as a mode of social criticism, in "The Science Fiction Novel"—mentioned here last month—I doubt that any of these three books will have any lasting influence on what we do or do not do to prevent a nuclear war, or to cope with one if it comes. They do, however, teach one lesson—both frightening and reassuring—that may get through if it is repeated over and over, in every form. Man is tough; society is brittle. Some of us can live through a nuclear war, if we are lucky and resourceful, but we can never again live in the same way as in the past.

* * *

If the mails weren't exhibiting all the symptoms of a crumbling institution, I might have had another announcement of a new and useful fan bibliography to mention last month. This is "A Checklist of Science Fiction Anthologies," to be published some time this year by Walco Publications of 307 Newkirk Avenue, Brooklyn 30, New York. Walco is W. R. Cole, whose index will list over one hundred anthologies published up to the end of 1958, with their contents—some three thousand stories — cross-indexed by title and author. It will probably be offset-printed or mimeographed, with plastic spiral binding. Order it now, and you can get it for $2.50—or only $2.00 if you pay with your order. Wait until after publication, and the price will be $4.00. This should be one of the most useful of indexes, which tries to give not only the contents of the anthologies, but the original magazine source of each story. It's a book I've wanted for a long time.

I don't know whether it is too late, by the time you see this, for you to get Perri Press's "Index to the Science-Fiction Magazines: 1951-1957" for the pre-publication price of $6.50—and Don Day's original "Index . . . 1926-1950" for the same price. Both books go to $8.50 on publication of the continuation, which has been compiled by that walking encyclopedia of science fiction, Norman Metcalf, who is now disseminating his postcards crammed with bibliographical gems from Lowry Air Force Base in Colorado. If anyone can answer the question I raised at the beginning of this column, about the number of future war stories, Norm Metcalf is it. Perri Press takes orders at Box 5007, Portland 13, Oregon.

* * *

An Advent: Publishers ad in the second "Detention," progress report of the Detroit Science Fiction Convention, says that "In Search of Wonder," by damon knight and the 9th "Best Science Fiction Stories and Novels," edited by T. E. Dikty, are both sold out! Good going — encouraging going.

As for the Detention, I guess there's still time for you to get your $2.00 to the convention treasurer, James Broderick, at 12011 Kilbourne Street, Detroit 13, Michigan, and to be at the Pick-Fort Shelby Hotel over the Labor Day week-end. You should get your announcements from the committee, for your $2.00 membership, but I'll risk reporting that Isaac Asimov is the banquet toastmaster, and Poul Anderson the Guest of Honor.

As for 1960, although I wince at the thought of the work involved in putting over a good convention, what's wrong with Pittsburgh? We're the closest of the contending cities, to a large part of the country—and I won't have to leave home at all, except for eighty to ninety-six consecutive hours before, during and after the arrival of you-all. Might even get a little sleep some time . . .

It will all be settled in Detroit. See you there and voting.

THE MONSTER FROM EARTH'S END, by Murray Leinster. Gold Medal Books No. S-832. 1959. 176 pp. 35¢

Here is one of Murray Leinster's typically competent SF-action yarns, a long way from the best he can do but also far from his worst. The big surprise isn't very surprising to anyone seasoned in science-fiction plots —or even in current monster movies —but the detail is nicely done, and the story moves along with professional smoothness and some suspense.

Gow Island, on the fringes of the Antarctic, is an advance supply base for exploring teams in Antarctica. A plane laden with scientists and specimens from a newly discovered hot-springs area is coming in for refueling, when the radio reports a wild clamor aboard. The ship lands—empty—and its pilot blows his brains out. Now the force on the island must solve the mystery—and promptly find that they have one of their own, as men and dogs vanish into thin air.

It's really no secret that something from Antarctica has gotten loose on the plane, and is now loose on the island. But the battle with the invisible enemies is very nicely handled, and the final siege has its suspense. This could make a good Grade B movie if they follow the author's script.

THE BLUE ATOM, by Robert Moore Williams.

THE VOID BEYOND, by Robert Moore Williams. Ace Books, No. D-322. 1958. 124 + 130 pp. 35¢

I rather like Ace's gimmick in this Double Book, of giving us an author's novel and a collection of his short stories, under the same covers. However, there are other writers with whom the combination would be happier.

The novel, "The Blue Atom," is the better half of the book, although

it is a rather routine wonder-adventure-action yarn. Survivors of a past Great Race, waking from suspended animation some time in our future, use their magical science to rebuild an empire among the stars—or, rather, one of them does, while another opposes him. And the "Wild Bunch," the vigilantes of space bossed by ruthless Jarr Rahmer, are first puzzled, then annoyed, and finally stirred to enraged action by the results of this meddling with their own "empire." It's fun to read, but not likely to be remembered long.

Of the six short stories and novelettes, dating back as far as 1947, my own choice is the second, "Refuge for Tonight," in which a rugged set of survivors of a war that has overwhelmed America are looking for a push-button weapon that is not what they expect. The title story, "The Void Beyond," is badly dated by an assumption that we now know is wrong—that men, literally, can't stomach weightless flight, and that women are so physiologically different that they can never enter space. Of course, one woman breaks through the barrier . . .

The other three are on this same take-'em-or-leave-'em level. "The Challenge" is a paradoxical-puzzle yarn that I rank second to "Refuge": the people of a strange planet have a machine that will predict the future by sheer logic—only it doesn't. "The Weapon" is another of the stories in which Mankind throws out the alien conquerors with one unsuspected super-weapon. "The Stubborn Men" is a pretty trite little short-short about the heroics of experimenters, and "The Final Frontier" as a rather plodding step towards Bradbury's mystic Martians.

I still like the long-plus-shorts formula. Hope Ace does it again, with some other writers of a little more originality and craftsmanship.

FIRST ON THE MOON, by Jeff Sutton. Ace Books No. D-327. 1958. 192 pp. 35¢

This is a competent first SF-book by a Convair engineer, which somehow just misses being superior. The reason for the miss I can't diagnose, but somehow there is no real feeling that the characters are on the Moon rather than out in the California desert. Maybe the underplaying is too far underplayed.

The plot is a standard melodrama: Russia and the United States are racing for the Moon, with open intentions of establishing a territorial claim in the United Nations and—by inference, at least—keeping the rest of the world out of Space, except on the winner's terms. Adam Crag is the last surviving trainee for command of the first American rocket: Red agents have killed all the rest, and pick up his own double just before take-off. A Soviet missile picks off the supply-drone that is accompanying the manned rocket, and a rocket manned with armed "pioneers" crashes shortly after their own landing—with one survivor.

Meanwhile, Crag has learned that one of his crew is a Red agent.

Under these conditions, it is Crag's job to make his landing, establish a base, and hold it until an atomic rocket is finished and able to bring a U.N. inspection team to evaluate the American and Russian claims. There is the expected sabotage, plus out-and-out sniping warfare with the crew of a second Red ship that has bombed the American camp before landing. Yet, as I have said, the Moon is never quite real, and the hunt for the Soviet agent in the crew seems to be left conveniently to work itself out by a "last-man" formula, rather than handled positively by Crag.

Even so, this is a very well handled yarn that introduces an author who should be able to do outstandingly better, once he has had a little more practice.

THE SECRET OF ZI, by Kenneth Bulmer.

BEYOND THE VANISHING POINT, by Ray Cummings. Ace Books, No. D-331. 1958. 161 + 95 pp. 35¢

The longer and better half of this Ace Double is by 1955's TAFF (Trans-Atlantic Fan Fund) delegate from England to the Cleveland convention; the shorter half is one of Ray Cummings' few contributions to this magazine, where it appeared as a novelette in March, 1931.

Kenneth Bulmer's yarn is another of the long series by everybody in the business, describing the efforts of an Earth underground to throw off the yoke of the invaders from the stars. But it's better and more calmly done than is usual these days, the plotting and counter-plotting is almost reasonable, and the secret of ZI is well kept and real when it is at last revealed. Meanwhile, intelligence agent Rupert Clinton has a really tough time to keep alive, what with the Alishang, their Wasp police, and his own people all after him.

The Cummings story is one of his many, many variants on the theme he first used in "The Girl in the Golden Atom"—adding the size-changing drug to an idea by Fitz-James O'Brien. The "atom"—which is no atom at all, at least this time, but some kind of micro-world inside a gob of gold—is under the domination of a wicked, crippled scientist, who kidnaps one of Cummings' usual pair of heroines and her father, the discoverer of the wonder drug. The girl's brother, a stupidly impatient type who gets the secondary heroine, and her boy friend go to the rescue . . . the drug "gets away" and produces giant flies and bacteria big enough to stomp on . . . and there is bloodshed all 'round the room for a sequel.

This particular line of attack of Cummings' was and is scientific nonsense, of course, but he was very deft at describing and suggesting the weird effects of growing small or large, and this version has less of the author's sometimes annoying, some-

times effective chopped-sentence style. Hollywood does worse every week.

A SCENT OF NEW-MOWN HAY, by John Blackburn. M. S. Mill Co., New York. 1958. 224 pp. $3.50.

Here is a "save the world" novel—a first—by a new English writer who handles his suspense like a veteran but leaves a little too much to coincidence.

The theme is an odd hybrid of Ray Bradbury's "Fever Dream" and John Christopher's "No Blade of Grass." The story opens with British Intelligence agents reporting that Russia is evacuating and isolating a tremendous area along the White Sea, presumably to prepare for the landing of a satellite station. Then an English merchant ship is run down by a Soviet warship. And then a bristling session of the U. N. collapses into a secret plea from the Russians for help in destroying a horrible fungus blight that has appeared out of nowhere—a mutant that is carried by men but converts women into horrible, deathless, all-consuming vegetable monstrosities whose spores, wind-borne, may wipe mankind off the Earth.

The rest of the story is the clever but inconsistent handling of the many clues through which Biologist Tony Heath, Intelligence head Kirk, and their co-workers trace the origin of the fungus to a fanatic Nazi biologist, Rosa Steinberg, whose discoveries had come too late to win for Hitler and who disappeared in the fall of Germany. It should be fairly evident to a seasoned reader just who and where Steinberg is, but the working out of the problem is tensely and plausibly enough handled so that you are carried along by the story, with new plot-lines taken up and new developments tossed in at the crucial points.

As a thriller, then, the book is a good one; however, Mr. Blackburn hasn't taken enough pains with his science-fictive elements. He doesn't try to justify the sexual selection of the mutant fungus—though he might have done so on a basis of hormone chemistry—but is content to use the gimmick as a horror element. He uses pure double-talk about discovering what radiations were used to produce the mutation, so that "counter-radiations" can be produced to un-mutate the stuff. And coincidence runs amok—from the moment Tony's wife remembers Rosa Steinberg's name in a dream until she meets a jolly gossip on the train.

If John Blackburn uses SF themes again, let's hope someone talks him into a little more professional handling.

DAY OF THE GIANTS, by Lester del Rey. Avalon Books, N. Y. 1959. 224 pp. $2.75.

This is Lester del Rey making like Poul Anderson making like de Camp and Pratt, without the whimsey. The original version was called "When the

World Tottered" and ran as a one-shot in *Fantastic Adventures* in December, 1950—so Day's "Index" tells me—and you're quite free to call it open fantasy, except that the author pretends that the Norse gods, dwarfs, frost-giants, and all the rest are real and alive in some other-dimensional continuum, and making another play for control of Midgard—the Earth.

Leif Svenson is the serious member of the Svenson clan; his twin, Lee, is the adventurer. And when it seems that Earth is going to be deep-frozen by a repetition of 1816—"eighteen hundred and froze-to-death"—or the Fimbulwinter of mythology, Lee shows up with some odd companions, and precipitates a battle which ends in the brothers' being carried off to Asgard. Seems that Odin, Thor, et al want some modern heroes to help them in the coming struggle against the frost giants—a postponed Ragnarok. They're all for brawn—namely Lee—while fox-faced Loki is backing brain, otherwise Leif. Both brothers find plenty to do—there is bloodshed, treachery, seeming magic that is neatly explained away. But this isn't del Rey's best vein.

BACK IN PRINT

EARTH IS ROOM ENOUGH, by Isaac Asimov. Bantam Books No. A-1978. 166 pp. 35 cents

Seventeen choice items of Asimovean science fiction, fantasy, and verse, from just about everywhere.

THE DOOR INTO SUMMER, by Robert A. Heinlein. Signet Books No. S-1639. 159 pp. 35 cents

Can you pass up any Heinlein book? In this one, he's exploring various means of time travel. There's a wonderful cat in it, too.

THE MAN WHO SOLD THE MOON, by Robert A. Heinlein. Signet Books No. S-1644. 159 pp. 35 cents

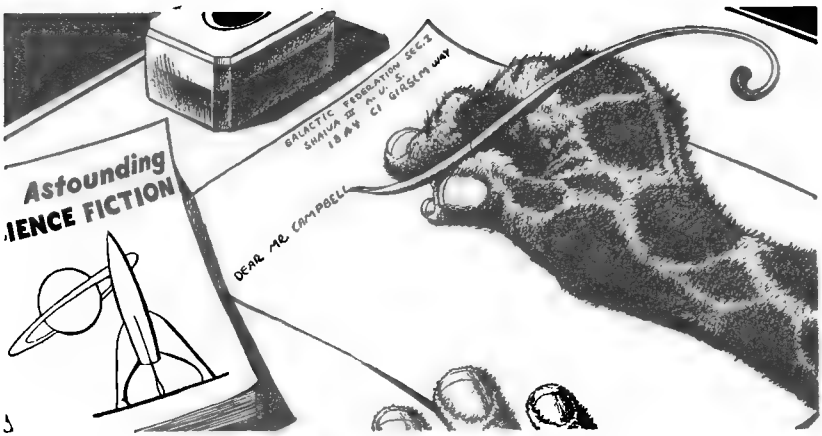
This re-reprint has four of the six stories in the original edition. "Lifeline" and "Blowups Happen" have been omitted, as has John Campbell's introduction. It includes the great title story, one of Heinlein's best, which was an original in the book.

WASP, by Eric Frank Russell. Perma Books No. M-4120. 190 pp. 35 cents

James Mowry was the "wasp" sent to harass the enemy in an interplanetary war. Very good, but I think this same author could have made it much better.

THE END

BRASS



TACKS

Dear Mr. Campbell:

Please accept my congratulations for the splendid story, "Despoilers of the Golden Empire." I found it to be all that you promised. As to the explanatory letter, however, "Methinks he doth protest too much."—Norman H. Smith, 242 Van Molan, Houston (22) Texas.

David Gordon is no lady; the quotation doth not fit.

My dear Mr. Campbell:

I have read with interest your editorial "We *Must* Study Psi" in Astounding Science Fiction for January. But there is one statement in it that I should like to question, or rather, to suggest an alternative explanation for. On the last page of the magazine you say "Known psi phenomena violate . . . the inverse-square law, the distance-law, and every other basic law of Science and

Logic." I have read a similar statement attributed to the scientist who is in charge of the psi phenomena experiments at General Electric.

Could not the apparent anomoly of the fact that psi phenomena seem to work regardless of distance be explained if one postulates a hydraulic analogy? Force applied to a non-compressible fluid transmits itself instantly to other parts of that fluid. If one assumes that the space between all things is filled with some equivalent of the fluid by which power is applied to hydraulic brakes, then the equal effectiveness of psi operations at near and far distances becomes explainable by known laws. Of course, it raises an equally difficult question of what that fluid-substance could be—perhaps it is that "God is always about in the Quad."—Mary B. Willis, 395 Palm Avenue, Lakeside, California.

Then we would indeed be transmitting messages through the highest channels!

Dear John:

At this time, I want to register a solid vote of approval of Asimov's article entitled "Our Lonely Planet," which appeared in the November 1958 issue. It's the *best* science-type article that I've seen in your magazine in many, many years.

Also, I wish to commend "The Reference Library," by P. Schuyler Miller, as it appears in *every* issue. Miller's column is more interesting than the fiction in some issues, and I frequently read his book reviews before I read anything else in the magazine. His writing style is lucid and effective with a deft, light touch. It adds a great deal to your magazine. —George H. Baskin, 1321 East 44th St. North, Kansas City 16, Missouri.

We liked them too, of course!

Dear Mr. Campbell:

In the February issue of ASF, you published a very interesting letter by a Mr. David Dressler. Mr. Dressler reported the results of an interesting experiment on the Hieronymus Machine. Although his results are interesting, I disagree strongly with two of his conclusions.

Firstly, his results can be quite adequately accounted for on the basis of suggestion. In fact, the suggestion is built into his instructions. The subject is instructed to place his hand on the sensor plate and report whenever he feels anything. Then the experimenter manipulates the prism. A suggestible subject will pick up these two cues and respond to them by feeling something. Because his—or her—hand is on a machine which must be run by electricity—at least, no other source of power is visible—the subject will report a tingling—mild shock—or vibration. (All machines vibrate, don't they?) An interesting experiment for your readers to try is the following: Put your hand on a table with the elbow supported, look at your hand, and see if you don't pick up sensations of

various sorts which you weren't previously aware of. It is sensations like these which Mr. Dressler's subjects may have been reporting.

As to the consistency of the dial settings when the reports of feeling something; well, I'll lay you standard odds of dollars-to-doughnuts that after each report Mr. Dressler said, "O.K.," or, "Fine," or some other apparently innocuous remark. If he did, he conditioned his subjects' reports to the discriminative stimulus of the position of the dial!

On these bases, I would predict entirely chance results if the subject could not see the prism and if the experimenter said nothing during the experiment.

Secondly, I disagree with his conclusion that these results are significantly different than chance. If suggestion did enter into his procedure, then he doesn't know exactly what the probability of getting a false report is. With the data he supplied, it may be calculated that 19.0 false reports per hundred subjects is enough to account for his results on the basis of chance. Less false reports than this, and his results are significant at less than the .05 point. But without knowing the number of false reports—i.e., reports of feeling something when there is nothing in front of the prism—no conclusions as to the significance of these data can be reached.

There is a third matter in which I disagree with Mr. Dressler. This is in regard to his interpretation of the deflection of the needle of a sensitive ohm-meter attached to the subject's skin. Without the accessory apparatus of blood pressure, pulse rate, and respiration rate detectors, this deflection could also be interpreted as: 1) his subjects *are* lying (ohm-meters are *the* basic component of lie detectors); 2) the subject suddenly decided to say something; 3) the subject suddenly said something; or 4) the subject changed his position slightly. You see, the GSR—galvanic skin response—is damnably sensitive to *any* change in the human being's "activity level."

Despite these disagreements with Mr. Dressler, I must admit that he is the first to make any sort of an attempt to apply scientific methods rigorously to the study of psionic machines. It must also be pointed out that his conclusions may be perfectly valid. However, to determine whether or not his conclusions are warranted, the following experimental controls should be incorporated into future research designs:

1) The subject must not be able to see the experimenter manipulate the prism and he should not be able to see whether or not there is anything in front of the prism.

2) Fifty per cent of the trials for any given subject should be given when there is nothing in front of the prism; the order of the true and the fake trials should be randomized.

3) The experimenter should not make any comments after the reports have been given unless the subject

knows that these comments do not reflect upon the accuracy of his reports.

4) The starting position of the dial should be varied at random from trial to trial.

5) Adequate statistical analysis of the data must be performed before reaching any conclusions.

Controls 1) and 2) are specifically designed at eliminating the influence of suggestion—data obtained from suggestible rather than sensitive subjects will be random rather than ordered. Controls 3) and 4) are specifically designed to prevent the conditioning of the subject—conditioned responses will also be random rather than ordered. Control 5) is to allow the experimenter to draw more valid inferences.

However, an experiment such as this would seem to take us farther away from the investigation of the purpose of the Hieronymus Machine which is, as I understand it, to respond differentially to the various elements, thus allowing samples to be analyzed qualitatively. To perform such an experiment control 2) would be dropped and the following control would be substituted: Control 2 a) several samples—3 or more —of pure elements are to serve as "stimuli"; the order of presentation of these "stimuli" must be completely random. If the machine actually can perform a qualitative analysis, then the dial settings would be unique for each element, but not necessarily the same for each subject.

If anyone is interested in doing either of these two experiments, I will be glad to perform the statistical analysis. Furthermore, if the results are significant, I will colaborate with the experimenter in writing up the experiment and will submit it to Dr. Rhine's "Journal of Parapsychology" for publication. However, anyone interested in either project should write to me first so that I can be sure that the proper experimental controls are incorporated into the experimental design.—John B. Long, 1105 S. Limestone, Lexington 36, Kentucky.

You may predict . . . but you're prediction is wrong, my friend! In tests I've made myself, a series of individuals have gone, alone without cross-checking, into the room where the machine was, used it, and written their results on slips of paper. Each was trying the device for the first time. No practiced experimenter accompanied them. None had any information on what points had been noted by others. Tabulation of results showed consistent detection of certain points.

It is not proper to include no-sensation reports, or random-reaction reports. Blind men will give no-sensation reports concerning the appearance of Mars. Most men observing Mars give random-reaction reports. The thing that is of importance is that a number of astronomers, working independently, at different times, have drawn maps of Mars that show high correlation. That is, those

few observers with exceptionally keen eyesight do observe something and cross-check each other, although people having perfectly good, normal vision cannot see anything consistently. And note, too, that no satisfactory photographs of Mars have yet been obtained; mechanical devices do not yet have the level of sensitivity and resolving power required.

Statistical analysis is an inappropriate tool for this study. A statistical sampling technique applied to an ordinary AC power line—taking instantaneous voltage readings—would yield the answer, "There is a random fluctuation between limits, but the statistical norm is zero."

Many times a pattern is completely lost when statistical methods are applied. A photometer, for example, uses an integrating device—opal glass, commonly—and reports the statistically averaged norm of the light-level. The results, when such automatic exposure devices are used in printing photographic negatives, can be remarkably inappropriate. Applied to a night picture of the pattern of city lights, it yields a gray, foggy-looking, meaningless print. Applied to a picture of a blond girl in a white bathing suit, against a white sand beach, the results are almost equally meaningless.

Statistics, like any other powerful tool, can be destructive or constructive, depending on the appropriateness with which it is applied.

It's inappropriate in this area.

———

Dear Mr. Campbell:

The amount of chatter you receive concerning psionics, esp, Hieronymus machines, et cetera, prompted me to add some fuel to the fire. I have noticed that a rather complete study—at any rate, a rather long and diversified study—of psi phenomena has not been used as a reference by your correspondents. I recommend that persons interested in this field take a crack at

"Psychical Physics," S. W. Tromp, Elsevier Publishing Company, New York, 1949.

I obtained a copy from the General Electric library at Schenectady but did not have time to read it particularly closely. From an overall scanning however, I can say that Tromp covers a large number of approaches to explanation of psionics. In general, he is selling a sort of resonance or sensitivity of some individuals to external stimuli, primarily EM fields. Quite a few experiments and observations are recorded, and in order not to miss anything such phenomena as electrophoresis, photosensitivity of organisms, et cetera, are also covered.

Question: Has anyone come up with a psionic gadget that works remotely—not in physical contact with a human, I mean? A control system with something like an amplified

brain wave input would be very useful in environments where physical reaction lag makes button pushing too slow, or—as in high g—impossible.

Your April editorial inspires one additional thought: One of the basic tenets of the "scientific method," whether applied to engineering or research, is "It ain't necessarily so." Sometimes we tend to forget the corollary, "It ain't necessarily not so, either."—R. B. Wilkerson, 232 Meadowbrook, Bloomington, Illinois.

I've looked at "Psychical Physics," too. I don't believe it. No really new class of phenomena ever starts off with a theoretical structure that esoteric! They may wind up there —but they start with Newtonian simplicity. Einstein comes a couple centuries later.

Dear Mr. Campbell:

Bravo for your editorial concerning psi in the April issue of Astounding.

I have just recently become interested in the field of psionics—in fact, it all started when I picked up an interesting-looking book at the library. It turned out that this book was on the subject of "Parapsychology" and was written by J. B. Rhine and J. G. Pratt. I found that once I started reading the book I just couldn't seem to put it down. Never had I realized that there was so much evidence being compiled on what I had heard of only as "the uncanny." In fact, I found this subject so interesting that I used it as a topic for a speech in both the Science Club and the public speaking class at my high school.

It is because of my speeches that I was particularly interested in your editorial, for I, too, found an overall feeling that "psionics shall not pass!" especially from the members and advisors of the Science Club. When the Science Club meeting had ended, a couple of the students asked me where I obtained my information, but for the most part, the general feeling was just a passing interest, being as how most of the audience had never heard much about psionics except for snatches of information from here and there.

But what really astounded me was the fact that most of the more intelligent students refused to accept any of the evidence which I produced; I even threw in a few of my own personal experiences concerning psi. They just scoffed and proceeded to tease me about it for days afterwards. Even my physics teacher came up to me the next day and said, "You realize, don't you, that I don't believe in any of that kind of thing? And you don't really see any sense in it either, do you?"

When I told him that I did believe that psionic powers existed, he just gave me a hopeless look and walked off.

But the more that people seem to doubt me and be afraid to accept my ideas, the more I am determined to

get them to open up their minds to these new-found concepts. Do I struggle in vain?—Jean Buntin, 510 Castro Lane, Bakersfield, California.

Not in vain—just up-stream! It is much easier, of course, if you turn and follow the fish downstream.

Dear Mr. Campbell:

I have been reading Astounding since the magazine was founded. April, 1959 issue really astounded me . . . for the first time.

I refer to Brass Tacks on page 157 and your statement concerning the incubi and succubi among our fellow citizens. I agree with you one hundred per cent but you are about the last person in the entire world I would have expected to even know such things existed.

WHAT in the world have you been reading? Or doing? I feel as if I had just read that "New York's Finest" had just been issued new ammunition for their police positives . . . with silver bullets! Or as if someone had called for a summit conference to agree on a new balance for witchcraft and sorcery.

As if an innocent new-born babe looked me square in the eye and said: "DAMN!"—George A. Foster, P.O. Box 330, Norwood, Massachusetts.

Tsk! Tsk! Did you forget I edited Unknown Worlds?

Dear Mr. Campbell:

The cover of your March issue seems to contain one grand and glorious boo boo!

On the "Movies Tonight" notice, EMSH spells it TUSCON. The western community where things happen in the horse operas is, was, and probably always will be, spelled TUCSON.

This name is apparently derived from the Papago term tjuk (black hill) son (at the foot of).

Early accounts of this now-respectable community describe it as "the headquarters of vice, dissipation, and crime. There was neither government, law, nor military protection. The garrison at Tucson confined itself to its legitimate business of getting drunk or doing nothing."—Ronald L. Ives, 2075 Harvard Street, Palo Alto, California.

Did you notice the "14:30 p. m."? Those birds are so far away from Earth and Arizona that none of them even knows what that town is or was—it's just a vague symbol! The misspelling was intended.

THE END

(*Continued from page* 7)
horizontally—i. e., different-but-equal, also exists. A woman may be equal to a man, but she's not the same as a man.

This, also, makes for complications when trying to decide "what is a human being"; there have been many cultures in history that definitely held that women weren't human.

I have a slight suspicion that the basic difficulty is that we can't get anything even approximating a workable concept of Justice so long as we consider equality a necessary, inherent part of it. The Law of Gravity applies equally to all bodies in the Universe—but that doesn't mean that the *force* of gravity is the same for all! Gravity —the universal law—is the same on Mars and a white dwarf star as it is on Earth. That doesn't mean that the *force* of gravity is the same.

But it takes considerable genius to come up with a Universal Law of Gravity for sheer, inanimate mass. What it takes to discover the equivalent for intelligent entities . . . the human race hasn't achieved as yet! Not even once has an individual reached that level!

This makes defining "human" a somewhat explosive subject.

Now the essence of humanity most commonly discussed by philosophers has been Man, the Rational Animal. The ability to think logically; to have ideas, and be conscious of having those ideas. The implied intent in "defining humanness" is to define the unique, highest-level attribute that sets man apart from all other entities.

That "rational animal" gimmick worked pretty well for a long time; the development of electronic computers, and the clear implication of robots calls it into question. That, plus the fact that psycholological experiments have shown that logical thought isn't quite so unique-to-Man as philosophers thought.

The thing that is unique to human beings is something the philosophers have sputtered at, rejected, damned, and loudly forsworn throughout history. Man is the only known entity that laughs, weeps, grieves, and yearns. There's been considerable effort made to prove that those are the result of simple biochemical changes of endocrine balance. That is, that you feel angry because there is adrenaline in the bloodstream, released from the suprarenal glands. Yes, and the horse moves because the cart keeps pushing him. Why did the gland start secreting that extra charge of adrenaline?

The essence of our actual definition of humanness is "I am human; any entity that *feels* as I feel is human also. But any entity that merely thinks, and *feels* differently is not human."

The "inhuman scientist" is so called because he doesn't appear to *feel* as the speaker does. While we were discussing possible theological ramifications of the humanness question, we might have included the zombie. Why isn't a zombie "human" any longer? Because he has become the logical philosopher's ideal; a purely rational, non-emotional entity.

Why aren't Tregonsee, the Rigellian, and Worsel, the Velantian, to

be compared with animals and/or robots?

Because, as defined in E. E. Smith's stories, they *feel* as we do.

Now it's long since been observed that an individual will find his logical thinking subtly biased in the direction of his emotional feelings. His actions will be controlled not by his logic and reason, but in the end, by his emotional pulls. If a man is my loyal friend—i.e., if he *feels* favorable-to-me—then whatever powers of physical force or mental brilliance he may have are no menace to me, but are a menace to my enemies. If he *feels* about things as I do, I need not concern myself with how he *thinks* about them, or what he does. He is "human"—my kind of human.

But . . . if he can *choose* his feelings, if his emotions are subject to his conscious, judicious, volitional choice . . . ? What then? If his emotional basis are not as rigidly unalterable as his bones? If he can exercise judgment and vary his feelings, can I trust him to remain "human"?

Could an entity who felt differently about things—whose emotions were different—be "human"?

That question may be somewhat important to us. Someone, sooner or later, is going to meet an alien, a really *alien* alien, not just a member of Homo sapiens from a divergent breed and culture.

Now it's true that all things are relative. Einstein proved the relativity of even the purely physical level of reality. But be it noted that Einstein proved that *Law* of Relativity; things aren't "purely relative" in the sense that's usually used—"I can take any system of relationships I choose!" There are laws of relativity.

The emotional biases a culture induces in its citizens vary widely. Mores is a matter of cultural relativity.

That doesn't mean that ethics is; there are laws of relativity, and it's not true that any arbitrary system of relationships is just as good as any other.

Can we humans-who-define-humanness-in-emotional-terms—despite what we theoretically say!—meet an equally wise race with different emotions—and know them for fellow humans?

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tolerate and understand, but our history shows we don't know how to understand a man who feels differently.

The most frightening thing about a man who feels differently in this; his feelings might be contagious. We might learn to feel *his* way—and then, of course, we wouldn't be human any more.

The wiser and sounder his different feelings are, the greater the awful danger of learning to feel that way. And that would make us inhuman, of course.

How do you suppose an Athenian Greek of Pericles time would have felt if threatened with a change of feelings such that he would not feel disturbed if someone denied the reality of the Gods, or suggested that the Latins had a sounder culture? Why—only a non-human barbarian could feel that way!

The interesting thing is that the implication of "inhuman" is invariably *sub*-human.

I suspect one of the most repugnant aspects of Darwin's concept of evolution was—not that we descended from monkeys—but its implication that something was apt to descend from us! Something that wasn't human . . . *and wasn't sub-human.*

The only perfect correlation is auto-correlation; "I am exactly what I am." Any difference whatever makes the correlation less perfect.

Then if what I feel is human—anything different is less perfectly correlated with humanness. Hence any entity not identical is more or less subhuman; there can't possibly be something more like me than I am.

Anybody want to try for a workable definition of "human"? One warning before you get started too openly; logical discussion doesn't lead to violence—until it enters the area of emotion.

As of now, we'd have to tell that robot "A human being is an entity having an emotional structure, as well as a physical and mental structure. Never mind what kind of emotional structure—good, indifferent, or insane. It's the fact of its existence that distinguishes the human."

Of course, that does lead to the problem of giving the robot emotion-perceptors so he can detect the existence of an emotion-structure.

And that, of course, gets almost as tough as the problem of distinguishing a masquerading demon from a man. You know . . . maybe they are the same problem?

"It's always puzzled me that in the old days they detected so many demons, and so few angels, too. It always looked as though the Legions of Hell greatly outnumbered the Host of Heaven, or else were far more diligent on Earth.

But then . . . the subhuman is so much more acceptable than the superhuman. THE EDITOR.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

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Photograph by Harold Halma

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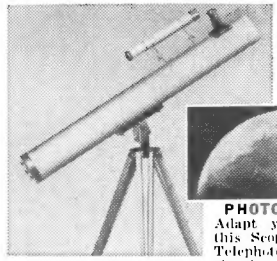

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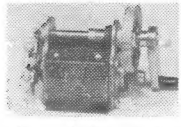

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